CHAPTER IV
METHODOLOGY

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CHAPTER IV

METHODOLOGY

Introduction

Research methodology is the systematic, theoretical analysis of the methods applied to the field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. Typically, it encompasses concepts such as paradigm, theoretical model, phases and quantitative and qualitative techniques. The design of the study provides an understanding of how the research is conducted and organized in order to obtain information that could be helpful for developing the research components. The way in which research is conducted may be conceived of in terms of the research strategy employed and the research instruments utilized in pursuit of a goal, the research objectives, and the quest for the solution of a problem.

This chapter deals with

- Statement of the Problem
- Need of the study
- Significance of the study
- Title of the Study
- Definition of key-terms
- Operational definitions
- Objectives of the study
- Assumptions of the study
- Hypotheses of the study
- Sample selection and sample size
- Limitations of the study
- Delimitations of the study
- Research Method
- Research Design
- Research in phases
• Field Implementation of Process based Learning: As per NCFTE 2009 guidelines
• Problems faced by the investigator during the field implementation
• Conclusion

4.1 Statement of the Problem

The researcher being a teacher educator for the last six years came across the assignments and examination papers of student teachers and found out that their presentation lack coherence, appropriate word choice, spelling and grammar. It was mainly because writing skill was assessed through traditional types of evaluation which had got a lot of disadvantages. They focussed on grades and rankings. Those types of assessments were norm referenced and speed based. They never tell what particular difficulties the students faced during the exam. Examinations gave much importance to product rather than process. It did not differentiate the skilled and the unskilled. Importance was given to memory which belonged to the lower level of cognition. English is a skill oriented language. It requires practice and effort. The system where pupils were assessed by means of a single examination conducted at the end of the year promoted hard work for a few days just before the examination. This kind of examination developed in learners the ‘learn and forget’ syndrome. Such last minute preparation does not help in the case of English language. English language needs constant practice over an extended period and this can be ensured only if evaluations are held at frequent intervals. So there is a dire need for change of the above said notion to create better atmosphere in teacher education.

4.2 Need of the study

A widely adopted belief driving language education is that learners should be able to learn independently (Gow and Kember, 1990). The limited contact time and the large class size often undermine the effectiveness of language learning and teaching. To enhance the development of student language skills, language educators have to create a learning environment that can foster autonomous learning of learners, in which learners can learn outside the classroom intensively and extensively. The traditional modes of learning, such as using tutorials or lectures, may not be adequate to assist learners in improving independent learning skills. It is thus crucial to provide
more support for the development of students’ independent learning skills in the language learning context. This implies that learners have to take “active” responsibility for their learning (Broad, 2006) and develop a lifelong learning culture. Electronic portfolios, as one type of alternative assessment, allow students to review, reflect, and determine what caused them to change. Then they can use this new information to determine future learning experiences. According to McLaughlin and Vogt (1996), as the field of technology is expanding rapidly every day, opportunities for electronic portfolios as an assessment tool will continue to advance. This requires new research efforts through explorations in the World Wide Web to transform the practice of portfolio assessment in the years to come. To make writing a more substantial, meaningful and successful experiences for students, English teacher trainees are the right people to be experimented. They should get a platform where they can write their assignments, share with others and get immediate feedback. An e platform will help the B Ed trainees to post and share their assignments in the form of a written composition. They in turn nurture students in school towards development of the writing skills. So the researcher sensitized the need of implementing E Portfolio in the teacher training institution to develop the writing skills of teacher trainees.

4.3 Significance of the study

This study contributes to an international body of knowledge concerning the design and implementation of E Portfolios in higher education. Three key aspects are suggested in relation to the significance of this study.

First, this study provides a basis for understanding the need for changes to curricula and the active collaboration of academic and support staff and administrators. Without this, an e portfolio could be reduced to an electronic student record keeper, with little reflection and acknowledgement of purpose. Staff needs to feel part of e portfolio implementation and to be empowered to make pedagogical changes and suggestions about the portfolio use. This study, by examining student engagement and support mechanisms adds to the knowledge concerning the implementation process and the role of staff.
Second, this study offers insights into the student engagement with an e-portfolio. Student engagement draws together insights about activities that tend to promote high quality learning.

Finally, the findings can provide a lens through which more focused interventions can be developed in order to increase the level of engagement. Electronic Portfolio can be undertaken in any teacher training colleges to enhance the writing skill of teacher trainees.

**4.4 Title of the Study**

The study is titled as “Effectiveness of Electronic Portfolio on developing Writing Skill among English Teacher Trainees”.

**4.5 Definition of key-terms**

The keywords in this study are defined as follows.

**Effectiveness** – Effectiveness is the capability of producing the result that is wanted or intended; producing a successful result. (Oxford Advanced Learners’ Dictionary)

**Portfolio** – Rick Stiggins (1994) defines a portfolio as a collection of student work that demonstrates achievement or improvement.

**Electronic portfolio** – Barrett (2000) describes electronic portfolios as (those that make) use of electronic technologies that allow the portfolio developer to collect and organize artifacts in many formats (audio, video, graphics, and text). A standard based electronic portfolio uses hypertext links to organize the material to connect artifacts to appropriate goals or standards. An electronic portfolio is not a haphazard collection of artifacts (i.e. a digital scrapbook or multimedia presentation) but rather a reflective tool that demonstrates growth over time’.

**Writing skill** – In Word reference (2010), Writing is one of the ways to give and idea or message which is form in writing on a piece of paper or the other area. It is an act of making marks on certain surface. Specifically, writing is one kind of expression in
language which is created by particular set of symbol, having conventional values for representing the wordings of particular language which is drawn up visually.

**Teacher trainee** – People who are training to become teachers which involves teaching classes of students (Oxford Advanced Learners’ Dictionary)

### 4.6 Operational definitions

**Effectiveness** – Here effectiveness is to find out the impact of electronic portfolios on enhancing writing skill among English teacher trainees.

**Electronic portfolio** – Electronic portfolio is an e platform where English teacher trainees document their work along with self, peer and teacher educator’s reflection.

**Writing skill** - Writing skill is a specific ability or skill that English teacher trainees show in progressive tasks. Here the teacher trainees need to accomplish the ability to express the content appropriately (content), ability to express a thought in an organized manner (organization), ability to express to use the mechanics of language-spelling, grammar and punctuation (Mechanics of writing) and ability to express the matter relevant to question asked in progressive tasks (focus).

**English teacher trainees**- English teacher trainees are the undergraduate students in teacher education institution who are specializing in English Methodology and Pedagogy in NSS Training College, Pandalam and St Mary’s Women’s College for Teacher Education, Thiruvalla.

### 4.7 Objectives of the study

- To identify the teacher trainees’ writing skill in English at the entry level
- To design and operate e portfolio on developing writing skill among English teacher trainees
- To find out the effectiveness of the constructed e portfolio on developing writing skills of teacher trainees in English
- To find out the development of writing skill among English teacher trainees at exit level

### 4.8 Assumptions of the study

- Teacher trainees concentrate on their ultimate scores.
• Teacher trainees overlook development of writing competencies.
• There is very little importance on process oriented writing.
• There is absence of reflecting on one’s own writing artefact.
• In short, achievement in writing happens as a result of rote memorization and less gain is shown in acquisition of writing competencies.

4.9 Hypotheses of the study

• There exists a significant difference between the entry behaviour and exit behaviour of both the experimental group and control group teacher trainees in writing English.
• There will be an impact of electronic portfolio implementation among experimental group on writing English.
• There will be a significant difference between the post test scores of experimental group and control group teacher trainees in writing English.
• There exists a significant difference between experimental group and control group teacher trainees in their writing skill on the basis of language components (dialogue, invitation, letter, notice, paragraph, report, précis and diary writing) assessed at exit level.

4.10 Selection of the sample

The population of the research is teacher trainees. As the investigator is a teacher educator of a teacher education college in Kerala state, the sample has been identified as B Ed teacher trainees of a teacher education college at Kerala. As this an experimental research, the sample size is taken as 35 in both the experimental and control group. Looking into the physical and technical facility requirements, convenient sampling technique was adopted.

4.11 Limitations

In the rural areas, the internet facilities were rarely accessible. Among five teacher education colleges in Pathanamthitta district, four colleges had internet facility. But permission was given only by three colleges. Out of the three colleges, the researcher selected NSS Training College, Pandalam. Therefore it was restricted to have the implementation of the designed treatment in NSS Training College, Pandalam, Kerala.
4.12 Delimitations

The researcher, being a Keralite limited her research to the training colleges in Kerala. The study was limited to only two B Ed training institutions where English Methodology was treated as optional. The researcher limited her study mainly to develop the writing skill ine-platform, sharing and reflecting their views and experiences with the researcher and the peer group.

4.13 Research Method

Experimentation is defined as ‘observation under controlled condition’. The experimental method is the best for determining the causal effect of an isolated, single independent variable on dependent variables and it also allows for precise control of variables. It provides a systematic and logical way for answering the research questions. It is the best way to establish cause effect relationship between variables and there is consistency in causal relationship. This method is considered to be the best one because it provides a high degree of control over extraneous variables and the manipulation of variables. It reduces bias and increases reliability. Experimental method helps to test hypotheses of causal relationship between variables. It also permits drawing inferences. Based on the above advantages of experimental research, the investigator adopted “Experimental Research Method” as two groups (experimental group and control group) with pre test and post test for the present investigation and designed accordingly.

4.14 Research Design

The research design is the conceptual structure of the research procedure. It provides planning on selection of subjects, data gathering devices and data analysis techniques in relation to objectives of research.
Figure 4.1
RESEARCH DESIGN

Experimental Research Method with Control Group and Experimental group design

- Variables
  - Independent
  - Dependent
    - Writing Skills
      - Electronic portfolio
      - Documentation
        - Dialogue
        - Invitation
        - Letter
        - Notice
        - Report
        - Paragraph
        - Report
        - Précis
        - Diary

- Tools
  - English Teacher Trainees’ Assessment Tool for Writing Skills (ETTATWS)

- Sampling
  - Sample
  - Size
  - Technique
    - Conventional Sampling
    - St. Mary’s Women’s College for Teacher Education Thiruvalla
    - NSS College Pandalam

- Duration of the Treatment
  - 6 months

- Analysis
  - Quantitative
    - Descriptive
      - Mean
      - Median
    - SD
    - Differential t test
    - ANCOVA

- Control of Extraneous Variables
  - Internal
    - History (Planned and Systematic manner)
    - Selection (whole class is used)
    - Maturation (One Semester) of B.Ed. Programme
    - Instrumentation (Validity of the tools was established)
    - Testing (Pre-test, Progressive tasks, Post-test)
    - Experimental mortality (teacher trainees admitted in regular streamline)
    - Experimenter bias (teacher is unknown to college)
  - External
    - Description of experimental treatment (detailed description of independent variable)
    - Multiple treatment interference (no other treatment during the duration of the experimentation)
    - Hawthorne effect (treatment happens in e platform)
Variables of the study

The present investigation is an attempt to develop writing skills among English teacher trainees using electronic portfolio documentation. The variables are:

**Independent variable**: Electronic portfolio (Documentation of discourse writing and reflecting on electronic platform)

**Dependent variable**: Writing skill in English

Duration of the programme

One Semester of teacher education at B.Ed. level i.e. about one hundred and twenty hours.

Size of the sample

The size of the sample in the present study was restricted to seventy teacher trainees in English (35 experimental and 35 control group)

Tool Developed

**English Teacher Trainees’ Assessment Tool for Writing Skills (ETTATWS)**

Control of threats to experimental validity

After selecting the experimental colleges, the researcher took steps to avoid threats to validity.

Internal validity

Internal validity occurs when the observed changes in the dependent variable are due to the effect of independent variable, but not due to some unintended variables as extraneous variable. If the researcher controls extraneous variables, the results can be due to the treatment and the study is internally valid.
Methodology

- **History** – It refers to the events that happen during the course of treatment that may influence the results. The study was conducted in a planned and systematic manner, so that it is free of unexpected events.

- **Selection** – The group taken for the study was really in need of improvement of writing skills. Since B Ed English teacher trainees are future English teachers, they should be equipped with the basic writing skills and technological proficiency.

- **Maturation** – Maturation threat is the factor that affects the final product due to the passing of time. The period of experimentation is one semester and the threat is avoided.

- **Instrumentation** – The tools administered were pre-test, and post-test. The validity of the tools was established.

- **Testing** – In the beginning of the study, a pre-test was administered. Progressive tasks and feedback were given to them regularly. Towards the end, a post test was conducted; thereby the effect of testing was balanced out.

- **Experimental mortality** – It refers to participants who drop out in the course of the study. The researcher carefully avoided this problem in the selection of the sample. The students were admitted in B Ed course in regular streamline.

- **Experimenter bias** – This threat happens when the researcher has some previous knowledge regarding the subjects involved in the experiment. Since the investigator was new to the two B Ed colleges and teacher training was of only one year, the question of experimenter bias was ruled out.

**External validity**

External validity is the extent to which the result of the study in one situation can be generalized and applied to another situation. Description of experimental treatment, multiple treatment interference and Hawthorne effect are threat to external validity. They are discussed below

- **Description of the experimental treatment** – It happens when independent variable is not described in detail. This threat was avoided by the detailed description of the independent variable.

- **Multiple treatment interference** – If the participant of the experimentation received more than one treatment, the researcher cannot claim that the end
product is the result of his treatment. So the researcher took every step to avoid the influence of any other treatment in the subjects during the duration of the experimentation.

- **Hawthorne effect** – Since the treatment happens in an e-platform, the participants are quite unaware of the experiment. So there is no threat of Hawthorne effect.

4.15 Research in Phases

4.15.1 Phase: 1

- Identification of the research problem
- Collection of literature on Portfolio assessment, Electronic Portfolio, Writing Competency and Reflective Practices
- Collection of reviews on related research
- Identification of B Ed college for sample selection
- Development of the content and framing the expected outcome

4.15.2 Phase: 2

- Development of a tool to identify the entry and exit level writing competency of teacher trainees of English.
- Development of the progressive task to be given in the course of the treatment
- The importance of Electronic Portfolio documentation was oriented to the authorities of the experimental college
- Administration of the pre-test tool among the selected sample in the experimental colleges

4.15.3 Phase: 3

- Designing the electronic platform for enhancing writing competency of teacher trainees of English
• Administration of the post-test tool among the selected sample in the experimental colleges

4.15.4 Phase: 4

• Collection of data and analysis of data

4.15.5 Phase: 5

• Report preparation and submission

4.15.1 Phase: 1

Identification of the research problem:

The researcher being a teacher educator in English for more than six years came across the written assignments, unit test, model exam and university exam papers of English teacher trainees and realized the fact that the performance of the teacher trainees in English were not up to the expected level. They were able to write the textual questions without many mistakes but they found it difficult to write something of their own like discourse writing. (e.g. – letter writing, report writing etc.) From this response, the researcher understood that they wrote textual questions out of rote memorization and sometimes even without proper understanding. It was a pathetic condition that even after completing graduation and post-graduation, the English teacher trainees who were going to mould the future generation found it difficult to write independently and without mistakes. The researcher sensitized the need for a change of the above said notion to create better atmosphere in teacher education.

Collection of Literatures on Portfolio assessment, Electronic Portfolio, Writing Competency and Reflective Practices

The researcher collected the literatures based on the variables involved in the study. In order to have a clear understanding of Electronic Portfolio which is the main variable of this study, one should know about Portfolio and its role especially in the educational context. So the researcher collected literatures based on Portfolio assessment, and Electronic Portfolio. The other important variable was Writing
Competency for which the researcher collected a lot of theories and models through which this skill could be enhanced. Analysis of literatures related to Reflective Practices in Education also helped the investigator to frame a model to develop writing competency of teacher trainees through reflective practice in an e platform.

**Collection of reviews on related research studies**

The investigator took the first six months of the research for collecting reviews related to the study. The researcher reviewed the studies related to Electronic Portfolio implementation in the educational settings and its challenges, development of writing competency through various models, and also the role of reflective practice in the educational scenario. From the reviews the researcher understood that continuous monitoring was essential to enhance the writing competencies of teacher trainees and the practice of reflection over one’s own writing artefacts acts as a reflective procedure. Such a practice was planned through electronic format and executed in the selected B Ed College.

**Identification of B Ed College for sample selection:**

It was found that examinations gave importance to the final product of writing. Process oriented approaches to writing were given preference very rarely. Modification should be made first in the teachers, so that they could mould their students in school in the line of process oriented writing. Since B Ed English teacher trainees were going to become future English teachers, the investigator felt that they were the appropriate population to be targeted. The accessible population for the study was students who were undergoing teacher training course in English. So the study was decided to be conducted in the B Ed colleges in Kerala.

There are 17 aided and 4 government B.Ed training colleges in Kerala. The researcher employed convenient sampling technique for the present study. The experimental college was selected on the basis of availability of internet facilities. The study focused on developing the writing competencies of the English teacher trainees. Hence the investigator selected the two B Ed colleges where English methodology was treated as a programme and the sample comprised of students who undertook English as their area of specialization. The two Teacher Education colleges selected by the investigator were

**NSS Training College, Pandalam** and
St. Mary’s Women’s College for Teacher Education, Thiruvalla

Their entry level writing competency was assessed through the scores of their test papers conducted in the first semester in English and homogeneity was established.

Size of the sample

The size of the sample in the present study was restricted to seventy teacher trainees in English (35 experimental and 35 control group).

Development of the content and framing of the expected outcome:

Teacher Education programme in Kerala goes for two semesters. In the first semester, teacher trainees had to master the theories of philosophy, psychology, technology, two courses related to their optional subject and an elective course. The second semester gave much importance to practical aspects like internship, preparation of audio visual aids, development of teaching manuals etc. In the second semester, during internship, the English teacher trainees had to visit a secondary school, and had to make the students familiarize with different types of discourses given in their English course book. These discourses were meant for developing the writing skill of students. In the case of discourse writing, one could not simply mug up the answers and reproduce it in the examination paper. So proper training was necessary to compose a text of their own. The teacher trainees also had to master all the components of secondary school (VIII, IX & X) text book. So the grammatical structures and various discourses of secondary English reader constituted a major part of the syllabus of English teacher trainees. Since the researcher’s focus was on developing the writing skill of teacher trainees, she felt that various discourses were the right content to be explored. Writing the discourses provided room for giving the answers in explanatory form. It required writers’ thinking process and regular practice to achieve perfection. So the researcher selected different types of discourses for developing the writing skill of teacher trainees. Moreover these discourses were embedded in the B Ed Programme (English) of MG University and Kerala University.
The researcher looked forward to the accomplishment of the following writing competencies in the teacher trainees to see whether they have achieved the cognitive components which were pooled down from their syllabus. The teacher trainees will be able to:

1. **Write connected sentences.**

   Connectives allow us to be more precise about the relationship between statements in a sentence or between sentences. Particular phrases and words serve different functions in connecting ideas and arguments. For example, different clauses or words can signal or ‘signpost’ additional or similar information, opposition or contrast, concession, cause or effect, emphasis, clarification, or a relationship in time or sequence.

2. **Make use of words correctly.**

   We use spoken and written words every single day to communicate ideas, thoughts, and emotions to those around us. Sometimes we communicate successfully, and sometimes we’re not quite so successful. However, a good vocabulary can help us say what we mean. Good writers are constantly aware of the impression each word carries. In narrative, written from the author’s point of view, word choice subtly shapes readers’ reactions. In dialogue or thoughts, the right word can reveal what other characters think and feel.

3. **Write without grammatical errors.**

   Using the correct grammar is important to avoid misunderstandings and help the reader to understand the writer easily. Language with errors will slow down the written communication and conversations. Moreover the writer finds it harder to express his ideas and thoughts clearly and concisely. So one should know the grammatical rules and forms for clear communication.

4. **Write without spelling mistakes.**

   English spelling is irregular and even many native speaker adults have difficulties with it. Spelling mistakes do not usually prevent the reader from understanding what the writer is trying to say, but they can create a negative
impression. For this reason it is advisable to try to remove them from important pieces of writing.

5. **Provide proper spacing between letters and words.**

   Over tight word spacing causes words to appear to run into each other, making it more difficult for the reader to distinguish one word or letter from the next. Conversely, word spacing that is too open—the more common occurrence—creates oversized blocks of white space between words, forcing the reader to read individual words rather than phrases or blocks of copy. This dramatically slows down the reading process, reducing reader comprehension and increasing the risk of distraction.

6. **Make use of capitalization and punctuation marks.**

   As greater numbers of people use text messaging, social network tools and other short forms of communication, the trend is to ignore capitalization. This bad habit is spilling over into email and other writing. While it might not be critical to capitalize a proper noun in a text message to our best friend, it is a good habit to use capitals in our professional communications. Demonstrating the proper mechanics of writing shows that we are educated and pay attention to detail.

   Punctuation marks can make or mar the meaning of a sentence. They are a set of symbols, and are an integral part of written language. There are specific rules for the usage of each. Punctuation marks help put spoken words into writing. The punctuation mistakes are due to the lack of a clear understanding of what a sentence is, and they result in fragments (incomplete sentences) or run-ons (‘sentences’ that do not end when they should).

7. **Have cognizance over format of different discourses.**

   There is no one set of structure or framework that covers all possible forms of written communication, except perhaps that writing should start with an introduction and finish with a conclusion. It is therefore necessary that the teacher trainees and students should have an awareness regarding the format of different types of discourses. The researcher had selected eight discourses for writing competency framework.

   a) **Dialogue writing** – A dialogue is a verbal exchange between two or more people that is reported in a drama, movie, or narrative. So, dialogues are spoken words
between two or more characters which serve a purpose within a story. Everyday speech is full of repetition and mundane utterances which are extremely tedious and boring when written down. Dialogue needs to convey information to the reader but in a way which sounds natural. So it is essential that one should know how to write a dialogue effectively.

b) **Invitation writing** – In writing an invitation letter, we cannot just put everything that we think we want to put in the letter. The invitation letter should have proper sequence so that it will give much information instead of creating confusion in the mind of the person whom we are inviting. It must contain only the pertinent information.

c) **Letter writing** – A letter is the most ancient form of communicating with those who are separated by distance. Correspondence plays a vital role in both social and business worlds. This helps one to keep in touch with others. Though with the emergence of new technology and increasing use of emails and SMS, it is assumed that letters have become out-dated, this is not the case. In fact, in matters of high importance, letter writing continues to be a preferred tool of communication. So it is inevitable that one should know the format and importance of letter writing.

d) **Notice writing** – A notice is a very short piece of writing which is usually very formal in style. It is widely used by individuals and organizations to announce events and celebrations, births and deaths, occasions like inaugurations etc. Writing an effective notice is a kind of art which can be acquired with practice with some basic points in mind while writing them out. Notice should give complete information and must be written in a clear and lucid style and easily understandable language.

e) **Paragraph writing** – A paragraph is a group of sentences that introduces, presents, develops, and winds up one main idea on a topic. It is an argument or a stand-alone piece of writing that usually has one controlling idea. The idea in a paragraph should actually be one, and the different types of structural devices should help it come out clearly. In fact, to some extent, quite a few of us tend to
lose the structural sense of the paragraph. By, and large, the entire problem arises
due to the fact that people start writing without understanding the structure of a
paragraph. Therefore, it is quite vital for us to understand the essential
components of a paragraph and how they appear, so that while writing we can
ensure their presence in the paragraphs that we write.

f) **Report writing** – Report is an important form of business communication.
Generating and analysing reports is a routine task in every professional’s day-to-
day activities. Reports are written to analyse a situation, to offer an alternative
method of operation, to study the growth rate of a company, to observe the trend
in socio–political-psychological changes happening around us in all walks of life
and so on and so forth. Since reports acquires such inevitability in the professional
world, it is mandatory to understand in detail how they are written, what their
structure is, and what makes them effective.

g) **Precis writing** – Precis is a short and concise account of some text, which gives
all its important points but none of its details. Since the purpose of a précis is to
briefly restate the idea expressed in the original write up, it does not include any
superfluous or illustrative material which may be a part of the original. A précis
follows and maintains the view of the author. It records in minimum words the
central idea which has been presented in detail in the original piece of writing.
Since the students will be required to write a précis quite often in their career, it
has to be practiced a number of times.

h) **Diary writing** – A diary keeps track of every moment of our life whether it be
big or small. A diary is a place where we can write our personal thoughts into. A
diary should contain all the important events that we had encountered in our lives.
So it is good to keep a diary in our life and resorts to the habit of diary writing.

Thus, the researcher in phase I of her research decided upon sample selection,
content selection and writing competency framework.
Figure 4.2
E Portfolio Intervention on Development of Writing Skill of Teacher Trainees

Entry Behaviour of teacher trainees in their writing skill
- General
  - Inappropriate use of vocabulary
  - Presence of a lot of grammatical errors
  - Spelling errors
  - No space between letters, words and sentences
  - Inappropriate use of Capitalization
  - Absence of punctuation marks
  - Ignorance of format of different discourses

- Specific
  - Rarely reveals thoughts, feelings and contexts of the characters in a dialogue
  - Fragments and run on sentences in letter writing
  - No or little attempts to follow format in invitation writing
  - Inability to write briefly a notice
  - Absence of sufficient details and examples and inappropriate organization in report writing
  - Inability to edit non-essential elements in précis writing
  - Disorganization of thoughts in diary / journal entries

Process of e portfolio intervention
- Orientation of Electronic Portfolio Operation
- Registration of e platform operation
- Logging in using ID and Password
- Signing of agreement
- Following teacher instruction
- Selecting the discourse
- Reading the guidelines
- Familiarizing the instruction
- Responding to the question
- Submitting the artifacts
- Reflecting the peers’ written task
- Understanding the teacher assessment
- Viewing Peer reflection
- Realizing one’s status nearer to the illustration
- Attempting progressive tasks for writing competency development

Learning Process
- Listening
- Observing
- Questioning
- Clarifying doubts
- Sharing
- Reflecting
- Downloading
- Viewing
- Reading
- Understanding
- Creating
- Submitting
- Writing
- Prewriting
- Writing of Artifacts
- Editing
- Rewriting
- Posting of Artifacts

Exit Behaviour
- General
  - At the outset the teacher trainees were able to
    - Make use of the words correctly
    - Write without grammatical errors
    - Write without spelling mistakes
    - Provide proper spacing between letters, words and sentences
    - Make use of capitalization and Punctuation
    - Have cognizance over format of different discourses

- Specific
  - Elaborates the thoughts, feelings and contents of the characters effectively in a dialogue
  - Write well-constructed and maintain varied structure in letter writing
  - Follows format and provides exemplary examples for invitation writing
  - Follows format and able to write notice briefly
  - Explains the topic sentence clearly using supporting details in paragraph
  - Presents information effectively using excellent paragraphs and transitions in report writing
  - Emphasizes key ideas and eliminates non-essential elements in précis writing
  - Expresses thoughts uniquely and creatively in diary writing

Development of Writing Skill
4.15.2 Phase: 2

**Development of a tool to identify the entry and exit level writing competency of teacher trainees of English**

The investigator had adopted Pre-test -Post-test control group (Fraenkel, Jack R., 1993) as her experimental design. In order to understand the level of writing competency before and after the intervention among teacher trainees, the researcher constructed pre-test and post test tools. The dependent variable writing skill was measured using Achievement test in English adopted by the investigator. The researcher adopted descriptive type achievement test for assessing the writing competency of the teacher trainees.

**Achievement test**

Any test designed to assess the achievement in any subject with regard to a set of pre-determined objectives

Major steps involved in the construction of achievement test

1) Planning of test
2) Preparation of a design for the test
3) Preparation of the blue print
4) Writing of items
5) Preparation of scoring key and marking scheme
6) Preparation of question wise analysis

**1) Planning of test**

- Objective of the test
- Determine the maximum time and maximum marks

**Objectives of the test**

The primary purpose of descriptive writing was to describe a person, place or thing in such a way that a picture was formed in the reader’s mind. Capturing an event through descriptive writing involved paying close attention to the details by using all our five senses. Descriptive writing helped students’ writing be more interesting and full of details. It encouraged students to use new vocabulary words. It could help students clarify their understanding of new subject matter material. Because of these
advantages the researcher constructed achievement test based on descriptive type writing.

Determine the maximum time and maximum marks
The test was decided to be administered in 100 marks in two hours.

2) Preparation of a design for the test

Important factors to be considered in design for the test are
- Weightage to content
- Weightage to form of questions
- Weightage to difficulty level

Weightage to content

For preparation of the test items, it was decided to include various types of discourses meant for secondary school students which in turn constitute a major part of the syllabus of English B.Ed teacher trainees. The researcher selected eight types of discourses in order to elicit descriptive type answers. The weightage given to each of the discourse was as follows:

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Content</th>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Report</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>Letter</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Paragraph</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Dialogue</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Invitation</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Diary</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Notice</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Précis</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Weightage to form of questions

Since the researcher’s attempt was to evaluate the writing competency of teacher trainees, she had excluded objective type questions. The form of questions
was comprised of long answers, short answers and very short answers and the weightage given to each of the form was given in the table below:

Table 4.2

Weightage to form of questions

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Form of questions</th>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>LA</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>SA</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>3</td>
<td>VSA</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>

- LA: Long answer
- SA: Short answer
- VSA: Very short answer

Weightage to difficulty level

A question paper should contain easy, average and difficult questions. The weightage given for each of the level was given below:

Table 4.3

Weightage to difficulty level

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Difficulty level</th>
<th>Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Easy</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>2</td>
<td>Average</td>
<td>54</td>
<td>54</td>
</tr>
<tr>
<td>3</td>
<td>Difficult</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

3) Preparation of the Blueprint

Blueprint is a three dimensional chart giving the placement of the objectives, content and form of questions. The main objective of this test was to find out the level of writing competency of teacher trainees. So the objective was not stated in the blueprint. Instead placement was given to content, form of questions and difficulty level.
Table 4.4
Blueprint

<table>
<thead>
<tr>
<th>SI No</th>
<th>Content</th>
<th>LA</th>
<th>SA</th>
<th>VSA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Report</td>
<td>(16)1</td>
<td></td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>Letter</td>
<td>(15)1</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Paragraph</td>
<td>(15)1</td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Dialogue</td>
<td>(12)1</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>Invitation</td>
<td>(12)1</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>6</td>
<td>Diary</td>
<td></td>
<td></td>
<td>(10)1</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Notice</td>
<td></td>
<td></td>
<td>(10)1</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Précis</td>
<td></td>
<td></td>
<td>(10)1</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>16</td>
<td>54</td>
<td>30</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

NOTE: Figures within brackets indicate the marks and figures outside the brackets indicate number of questions.

4) Writing of items

Based on the design of the test, 24 items (three times that of the items of the blueprint) was pooled initially. Items were prepared by reviewing the relevant literatures and in consultation with experts and subject specialists. Sources used for item development were text books, question papers for various competitive exams (B Ed and Secondary) and internet materials. Items were prepared under different categories like Dialogue, Letter, Invitation, Notice, Paragraph, Report, Précis and Diary writing. The items were scrutinized by experts in the field of English teaching. Certain items were deleted owing to the unclear ideas. The 16 selected items were then edited in the light of expert criticism and were divided into two sets with 8 questions each. The first set was administered to 50 teacher trainees and the second set to another group of 50 teacher trainees. The researcher analysed the answer sheets and found out that the teacher trainees didn’t attempt certain items and for some
attempted questions they got very low marks. Such items were omitted. Moreover she conducted an interview with them and the teacher trainees reported that they took more time to answer certain questions and some of the questions were ambiguous. Those questions were either deleted or modified. The final draft with 8 questions was administered to 50 students and their scores were calculated. Based on the same blue print, the researcher constructed an identical question paper for post-test and administered it on another group of 50 teacher trainees and their scores were calculated. The coefficient correlation of the two scores were found out using Pearson Product Moment Correlation and it was found to be 0.76 which suggests high correlation between the two scores. The final draft of the test with instruction was given in Appendix 1. The answer sheets were scored using the rubrics (given in Appendix 2) developed for each of the discourse.

[Report writing (16 marks) Letter writing (15 marks) Paragraph (15 marks) Dialogue (12 marks) Invitation (12 marks) Diary (10 marks) Notice (10 marks) Précis (10 marks)]

5) Preparation of scoring key and marking scheme

In the case of objective type items where the answers are in the form of some letters or other symbol a scoring key is prepared. In the case of short answer and essay type questions, the marking scheme is prepared. Since the investigator had adopted descriptive type questions only, she had listed out the value points to be credited in the form of rubrics and fixed up the marks to be given to each value point which was given in detail in Appendix 2.

6) Preparation of question wise analysis

Question wise analysis helps to know the strengths and weakness of the test; to tally the question paper and the blueprint. Each question is analysed according to the topic, question type and form, estimated difficulty level, time needed, and marks allotted.
### Table 4.5

**Question wise analysis**

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Content</th>
<th>form of questions</th>
<th>Difficulty level</th>
<th>Score</th>
<th>Percentage</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Report</td>
<td>LA</td>
<td>Difficult</td>
<td>16</td>
<td>16</td>
<td>20 mnts</td>
</tr>
<tr>
<td>2</td>
<td>Letter</td>
<td>SA</td>
<td>Average</td>
<td>15</td>
<td>15</td>
<td>18 mnts</td>
</tr>
<tr>
<td>3</td>
<td>Paragraph</td>
<td>SA</td>
<td>Average</td>
<td>15</td>
<td>15</td>
<td>18 mnts</td>
</tr>
<tr>
<td>4</td>
<td>Dialogue</td>
<td>SA</td>
<td>Average</td>
<td>12</td>
<td>12</td>
<td>17 mnts</td>
</tr>
<tr>
<td>5</td>
<td>Invitation</td>
<td>SA</td>
<td>Average</td>
<td>12</td>
<td>12</td>
<td>17 mnts</td>
</tr>
<tr>
<td>6</td>
<td>Diary</td>
<td>VSA</td>
<td>Easy</td>
<td>10</td>
<td>10</td>
<td>10 mnts</td>
</tr>
<tr>
<td>7</td>
<td>Notice</td>
<td>VSA</td>
<td>Easy</td>
<td>10</td>
<td>10</td>
<td>10 mnts</td>
</tr>
<tr>
<td>8</td>
<td>Précis</td>
<td>VSA</td>
<td>Easy</td>
<td>10</td>
<td>10</td>
<td>10 mnts</td>
</tr>
</tbody>
</table>

### Validity

According to Best and Khan (2002) “validity is that quality of a data gathering instrument or procedure that enables it to measure what it intends to measure.” The present tool should establish validity.

### Content validity

The purpose of the study was to enhance the writing competency of English teacher trainees. For this, the researcher went through the objectives of English language learning prescribed in the syllabus of English teacher trainees. Based on the objectives, the researcher constructed a blueprint, achievement test, and rubrics and submitted it for expert validation. The items were given to the following experts for validation:

- Dr K Unnikrishnan, Associate Professor, NSS College, Pandalam
- Dr K Ushadevi, Associate Professor& HOD, NSS Training College, Pandalam
- Dr N Jayasree, Associate Professor, NSS Training College, Pandalam

Certain items were deleted and edited in the light of expert criticism and the content validity was ensured.
Face validity

A tool is said to have face validity, when it appears to measure whatever the author had in mind, namely what he has thought he was measuring (Garret, 1971). Face validity is a measure of how representative, a research instrument is. In many ways, face validity offers a contrast to content validity. The difference is that content validity is carefully evaluated, whereas face validity is a more general measure. The tool was given to experts in the field of Teacher Education and School Education for obtaining their opinion. Necessary rewording and rephrasing of the items have been carried out with the help of experts.

Reliability

Reliability of the test refers to the degree of consistency with which it measures what it intended to measure. Expert validation itself was considered as reliable as far as subjective questions were concerned.

Development of the progressive task to be given in the course of the treatment

The researcher ultimately selected eight discourses for testing the B Ed trainees’ level of writing competency in English (entry level and exit level). The researcher made the teacher trainees document each discourse with different questions three times in the form of progressive task. So the teacher trainees had to document twenty four artifacts in three progressive tasks. One of the progressive tasks was taken from a text book (Tuition to Intuition) and the other two progressive tasks questions were also got validated by the ELT experts.

The importance of Electronic Portfolio documentation was oriented to the authorities of the experimental college:

Any experimental research in colleges needs support of the faculty and the authorities. Before initiation of the research, the investigator wanted to establish good rapport with the faculty and the authorities. Hence the researcher went in person to meet the authorities of the colleges and highlighted the purpose of the experiment and the importance of providing training to English teacher trainees on enhancing writing skill.
Administration of the pre-test tool among the selected sample in the experimental colleges

After deciding the sample for the study, the investigator prepared pre-test, post-test and its rubrics. The investigator personally administered all the tests, and the time variation and methods of administration for each test was strictly followed in two colleges to create an ideal situation. The data was collected during the month of September 2013.

4.15.3 Phase: 3

Designing the electronic platform for enhancing writing competency of teacher trainees of English

The intervention strategy was designed using curriculum components of English teacher trainees. The different language discourses should be mastered by the teacher trainees in the second semester, especially during their internship. So practice was given in the first semester itself i.e. from October 2013 to March 2014. The control group was taught by the investigator herself through conventional method. The experimental group was given electronic portfolio treatment. The researcher developed an e platform with the help of some software professionals. Electronic portfolio assessment was conducted at three levels. Eight types of discourses were incorporated in each level. At every level teacher educator and peer reflect upon the writing in terms of content and form. It was followed by the teacher educator’s assessment based on the framed criteria. Therefore the programme encompasses reflection and assessment at three different times. It was referred to as progressive tasks. The researcher manipulated portfolio writing in the form of progressive tasks as a medium for learning activities. The writing competency level was differentiated using rubrics. The artefacts of the students were attached to the scoring rubrics.
Figure 4.3: Teacher Educator’s Electronic Platform

Teacher Educator’s Login page

User ID
Password
logs in

Welcome Page

Home
Question Bank
Exercises
Review
User manual
Sign out

Add/Edit Users

Provide descriptive type discourses

Teacher trainee’s Name
Phone Number
E-mail ID

Name
Discourse Name
Course
B.Ed
Batch
A/B
Created On
dd/mm/yy
Expires On
dd/mm/yy

Choose File
Upload Guidelines
Files from MS Word
already saved

Choose File
Upload Rubrics
Files from MS Word
already saved

Create
Teacher Educator’s electronic platform

A website address of e portal was given to the teacher educator. She was able to access the e portal by giving her ID and password. Then she was directed to the welcome page. The welcome page consisted of options like Home, Add/ Edit Users, Exercises, Question bank, User Manual and Sign out. Home helped the teacher educator to return back to the home page. The investigator added the teacher trainees to the e portal using Add/ Edit Users option thereby giving IDs and Passwords to them. For that purpose the teacher trainees were asked to give their name, phone number and email ID. Whenever there was any mistake in the given information, the teacher educator made use of Edit option to change or modify it. For assigning discourses to the teacher trainees, the teacher educator had to go to the Exercise option. Here the teacher educator assigned the particular discourse, indicated the course and batch (B. Ed), mentioned the date on which the assignment was allotted and the expiry date of the assignment. Moreover the teacher educator had uploaded the Guideline and Rubrics of the discourses in a word file. Once this work was over the teacher educator was able to fill the space given in the Question bank option. This was meant for typing the question of the particular discourse. User Manual provided instruction regarding how to use the e portal. Through Review, the teacher educator reviewed the artifacts of teacher trainees and provided confidential feedback to them. The session came to an end when the teacher educator signed out from the e portal.
Figure 4.4: Teacher Trainees’ Electronic Platform

Teacher trainees’ login page

User ID
Password

Declaration Page
Declaration
I agree

Selection of discourse

Dialogue
Invitation
Letter
Notice
Paragraph
Report
Précis
Diary

Reading the Question

Download and read the guideline file

Download and read the rubrics file

Respond to the question

Submit the artifacts

View peer artifacts

Reflect on peer artifacts and comment on it

View the reflective comments received from peers and teacher educator

Reflect one’s own strength and weakness

Sign out
Teacher trainees’ electronic platform

The teacher trainees were given e portal address. They were able to log in the e portal using the ID and Password given to them. They were then directed to the Declaration page. Here the teacher trainee had to agree to the declaration saying that they would do the assignments independently. The next page was meant for Selection of Discourses. Eight discourses were incorporated in each level of progressive task. The teacher trainee was able to view only one discourse at a time. According to the instruction of the teacher educator, the teacher trainees selected a particular discourse at a time and read the question given on the basis of that discourse. The next task before the teacher trainees was that they had to download the Guideline and Rubrics file of that particular discourse. Guideline file provided them a clear idea regarding the criteria and illustration of that discourse, and a justification of how the illustration satisfied the above criteria. Rubrics file provided the value points through which they were assessed. Then they responded to the question and submitted their artifacts. Once the submission process was over, they viewed the artifacts of their peers and reflected on them. When that process was over, they started viewing the reflection that they got from their peers and teacher educator. The process came to an end when they reflect on their own artifacts (self-reflection) in the light of the artifacts of their peers and the reflective comments received from their peers and teacher educator.

After processing all the three progressive tasks, the teacher trainees were asked to make a choice of good, better and best among all their written performance. These progressive tasks including the reflection of teacher educator, peer and self served as the documents for portfolio. Thus portfolio in the first stage comprises of the following artefacts

1. Discourse I a
2. Peer reflective writing I a
3. Teacher reflective writing I a
4. Self-reflective writing I a

Similarly portfolio was documented in the second and third stages.
Illustration of Electronic Portfolio documentation

TEACHER EDUCATOR’S LOGIN PAGE

WELCOME
EXERCISE DETAILS

TEACHER TRAINEES’ LOGIN
DECLARATION

I know that e-learning portal will help me in improving my writing skills. So I promise that I will not seek help from others or refer to any source material to do my assignments.

SELECTION OF ASSIGNMENT

Welcome to eLearningPortal. To submit your assignments, click here.
SELECTION OF EXERCISE

QUESTION

Letter writing

Criteria:

1. Your Address
   The return address should be written in the top right-hand corner of the letter.
2. The Address of the person you are writing to
   The address should be on the left, starting below your address.
3. Date
   Different peoples of the date in different sides of the page. You can write this as the right or the left of the page after the address you are writing to.
4. Salutation or greating
   1) Dear Sir or Madam,
      If you do not know the name of the person you are writing, use this.
   2) Dear Mr. Jenkins,
      If you know the name, use the title Mr, Mr., Miss or Ms, Dr. etc.
5. Ending a letter
   1) Yours faithfully
      If you do not know the name of the position, and the letter this way.
## RUBRICS

### Rubrics – letter writing

<table>
<thead>
<tr>
<th></th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sentences</strong></td>
<td>All sentences are complete, well-constructed (no fragments, run-ons) and well-organized.</td>
<td>Most sentences are complete and well-constructed (no fragments, run-ons).</td>
<td>Some sentences are incomplete or poorly constructed (fragments, run-ons).</td>
<td>Some sentences are not well-constructed, and there are many fragments or run-ons.</td>
</tr>
<tr>
<td><strong>Capitalization and Punctuation</strong></td>
<td>Writer makes no errors in capitalization and punctuation.</td>
<td>Writer makes 3-5 errors in capitalization and punctuation.</td>
<td>Writer makes 6-9 errors in capitalization and punctuation.</td>
<td>Writer makes more than 9 errors in capitalization and punctuation.</td>
</tr>
<tr>
<td><strong>Ideas</strong></td>
<td>Ideas were organized in a clear and logical manner. It was easy to figure out what the letter was about.</td>
<td>Ideas were expressed in a logical, clear manner, but the organization could have been better.</td>
<td>Ideas were somewhat organized, but somewhat confused. It took more time to figure out what the letter was about.</td>
<td>The letter seemed to be a collection of random sentences. It was very difficult to figure out what the letter was about.</td>
</tr>
</tbody>
</table>

## ANSWERS

### e-Learning Portal

**Answer**

Dear [Name],

I hope you both are well. I wish you both a happy married life. I know that I have done a great spite for forgetting the wedding anniversary. I sincerely apologize for my mistake. However, it is not done intentionally. I have to attend an important meeting at my office. We can meet next week.

With love,

[Signature]

Ann Matthews

Submit Your Answer Here
REFLECTIVE COMMENTS

COMMENTS
PEER CORRECTION

TEACHER REFLECTION
SELF REFLECTION
Administration of the post-test tool among the selected sample in the experimental colleges

At the end of the semester, the investigator administered a descriptive type achievement test to measure the writing competency of teacher trainees of English at the exit level. The researcher intended to identify the effectiveness of the programme by comparing the pre-test and post test scores as well as the difference between entry level and exit level achievement test scores. The data collected were arranged for analysis.

4.15.4 Phase: 4

Collection of data and analysis of data

Before the treatment

The researcher, in the initial stage conducted a descriptive type pre test to understand the writing competency of English teacher trainees. The pre-test was consisted of eight descriptive type questions which carried 100 marks in total and was to be answered within two hours.

During the treatment

During the treatment the researcher collected three types of data. They were answers to three progressive tasks, peer reflection, teacher feedback and self-reflective writing.

After Treatment

After the treatment, the post test was administered to measure effectiveness of the electronic portfolio on developing writing skill among English teacher trainees.

Scheme of Data Analysis

The obtained data from pre test, and post test of writing competency was analysed using the following statistical methods.

- Descriptive statistics
- Independent sample t test
- Paired sample t test
- ANCOVA
4.16 Field implementation of Process based learning: As per NCFTE 2009 guidelines

<table>
<thead>
<tr>
<th>Guideline 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher education should provide opportunity to student teachers for reflection and independent study without packing the training schedule with teacher directed activities alone.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
<th>Evidence from Related Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher's role is interactive, rooted in negotiation. Teacher trainees showed interest in posting their reflective comments to their peers in the electronic platform. Moreover they were very eager to see the reflective comments they received from their peers and teacher educator.</td>
<td>Teacher educator forced the trainees to exchange their papers and made critical comments on it. But most of the trainees considered it as a time consuming process.</td>
<td>Ru Chu Shih,( 2011) investigated the effect of integrating Facebook and peer assessment with college English writing class instruction through a blended teaching approach. The findings suggested that incorporating peer assessment using Facebook in learning English writing can be interesting and effective for college level English writing classes.</td>
</tr>
</tbody>
</table>
**Guideline 2**
Teacher educators evoke responses from students to engage them with deeper discussions and reflection. Students are encouraged to identify and articulate issues for self-study and critical enquiry. Students maintain reflective journals on their observations, reflections, including conflicts.

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
<th>Evidence from Related Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher trainees of the experimental group engaged in critical enquiry through the e-platform and maintained a reflective journal which helped them to document their growth over time</td>
<td>There were no deeper discussions or reflections among the teacher trainees of the control group. They gave importance to the mugging up of the criteria of different type of discourses.</td>
<td>Maria B Cequena, (2013) This study attempted to determine the effects of blogging (weblogs) on the forty one freshman college students’ writing performance based on the results obtained from pre-test (entry essays) and post-test (exit essays) mean scores, interviews and reflections. The findings matched students’ perception that blogging helped them improve their writing skills because of their peers’ constructive feedback.</td>
</tr>
</tbody>
</table>
**Guideline 3**

Teacher education engages teachers with the curriculum, syllabi and textbooks to critically examine them rather than taking them as ‘given’ and accepted without question.

<table>
<thead>
<tr>
<th>Experimental Group</th>
<th>Control Group</th>
<th>Evidence from Related Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher trainees of the experimental group critically examined the self-instructional package given in the e platform and intelligently explored it. They viewed the rubrics of each of the discourse uploaded by the teacher educator and understood the criteria through which they were going to be evaluated. Through selecting, posting, submitting, uploading, downloading etc. the teacher trainees developed their technical skills too.</td>
<td>The control group absorbed the important points of the discourse the teacher educator conveyed through teaching. They accepted the ‘given’ without raising any question.</td>
<td>Qiuyun Lin (2008) The purpose of the study was to investigate and understand the teacher candidates’ perception of learning experiences and processes that occurred in the development of the e portfolios in and elementary teacher education program. Respondents reported that, after using the e portfolios, they were stimulated to engage in reflective practices to develop effective learning strategies, and to gain as well as review technology skills.</td>
</tr>
</tbody>
</table>
4.17 Problems faced by the investigator during the field implementation

The researcher faced some difficulties during her field implementation programme. The first problem was to find out an institution where 35 computers with internet facilities were available. The sample size consisted of 35 and hence 35 computers were needed for the study. Although the facilities, as mentioned above, were available in certain colleges, the authorities were not ready to give permission to make use of those facilities in a whole semester. However, the principal of NSS College, Pandalam had helped the investigator by permitting her to make use of the internet facilities and also adjusted the time table of teacher trainees of English to implement the intervention programme. She had also assured to make available full time generator for the purpose. A few teacher trainees had to stay back even after the college time for lack of typing speed. On certain occasions, the internet runs slowly because 35 computers were being used simultaneously. Apart from correcting the assignments of 35 teacher trainees, the researcher had to monitor ‘peer corrections’ also. There may be hurting words in the ‘peer correction’, sometimes. So the researcher took precautions in order not to affect the students such hurting words in the negative.

In spite of all the above problems, the field implementation was quite interesting for both the researcher and the teacher trainees.

4.18 Conclusion

The current chapter has thus presented the modus operandi followed in the study. The quantitative data thus obtained were subjected to analysis and interpretation which leads to Chapter V of this thesis.