

**Executive Summary of the Findings of the**

**UGC Major Research Project**

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**On**

**Preparation, Execution and Analysis of Reflective Journal for  
Pre-service Student Teachers  
at Secondary Level**

*Submitted by*

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## **Introduction**

Reflection refers to an activity or process in which an experience is recalled, considered and evaluated in relation to certain broader objectives. It is a response to past experience and involves conscious examination of the experiences as a basis for evaluation and decision-making and as a source for planning and action. Reflective practice of teachers consist of asking “what, why and how” questions to the aims of education, curriculum, school community, educational context and the instructional techniques in order to make a better sense out of them. A ‘Reflective Journal’ with regard to teaching profession is a record of what happens in a teacher’s life, both inside and outside of the classroom. Reflective journals are a means to engage the teachers in critical self-reflection, self awareness and enable them to make further improvements in their profession.

Holly (1989) has pointed out that reflective journal writing can give time to think about the work, long enough to reflect on it and to begin to understand it. Achieving higher levels of reflective thinking is one of the major aims of reflective writing. But the present scenario of reflective journal writing does not become an occasion for pre-service student teachers to holistically evaluate their practice in the light of educational theories, explore their own beliefs and practices, become more aware of their teaching styles, be able to monitor their own practices, to identify certain critical incidents and draw certain conclusion from their experience and above all to learn by processing their experience.

Therefore the investigators are in view that the systematic critical reflections of daily teaching experiences in the classrooms through its documentation in a structured reflective journal by the pre-service student teachers may help them to enhance their professional development. Hence the focus of the project was on the development of a structured reflective journal format for pre-service student teachers at secondary level, its execution, analysis of the quality of reflection in the journal writings and finding out its effects on pre-service student teachers’ professional development.

## **Method and Research Design**

This study employed procedures associated with both qualitative and quantitative paradigm. The investigators prepared a structured reflective journal for pre-service student teachers at secondary level, executed the same during their practice teaching period and analyzed the content of their reflective journals to identify the focus and reflective categories, and their levels of reflectivity. Hence the entire study consisted of six major phases such as

preparation of reflective journals, execution - writing the journal by pre-service student teachers, collection and content analysis of the journal, preparation, standardisation and administration of journal writing experience questionnaire, preparation, standardisation and administration of the scale for measuring pre-service student teachers' attitude towards reflective journal writing and personal interviews

### **Population and Sample**

All the pre-service student teachers at secondary level of Colleges of Teacher Education of Kerala state constituted the target population of the study. The investigators draw a sample of 500 pre-service student teachers from the population concerned.

### **Tools Used for the Study**

The following tools were used in the study.

1. Structured Reflective Journals (Prepared by the investigators)
2. Pre-service Student Teachers Journal Writing Experience Questionnaire (Prepared and standardized by the investigators)
3. Scale for Measuring Pre-service Student Teachers' Attitude towards Reflective Journal Writing (Prepared and standardized by the investigators)
4. Semi structured Interview Schedule (Prepared by the investigators)

### **Data Analysis**

Data was analysed by using both qualitative and quantitative approach

#### **Qualitative analysis**

The data in the form of journals which were written by pre-service student teachers during their practice teaching were analysed using content analysis. The content analysis of the written reflective journals comprised determining codes to identify the journal entries first; then, pulling them together to form categories based on the research questions, so that they became the answers to the research questions. The content analysis of the student teachers' reflective journal consisted of five steps such as familiarization, identifying a thematic framework, indexing, charting, mapping and interpretation.

#### **Quantitative analysis**

After determining each theme with its derived concerns a set of rules for coding procedure were formulated for consistency and coherence. The coding protocol was in

accordance with the indicators used in the developing phase of the research journal. Each Journal was tabulated for the following aspects: Theme and its different derived concerns; the level of reflectivity: frequency of occurrence; the date of each episode. Finally, for each journal the identified levels and their recurrence were reported in a summary table. After coding these reflective writings appropriate statistical techniques were used to test hypotheses. The statistical techniques to be used in the study are mean, percentage analysis, standard deviation, t' test, Analysis of Variance, Post hoc Scheffe Test

### **Major Findings of the Study**

Pre-service student teachers at secondary level maintained the structured reflective journal developed by the investigators throughout their practice teaching period and documented their daily teaching experiences in the classrooms and their experiences in the practice teaching schools very frequently. They reflected more often in the delivering of teaching process than planning and preparation of teaching process. Many of pre-service student teachers wrote about how critical incidents had an impact on and helped them to shape their perceptions and attitudes. While reflecting on critical incidents, the student teachers typically responded emotionally at first, reporting feelings of frustrated, drained, confused, embarrassed and overwhelmed. Two main themes emerged in the reflection of critical incidents were critical teaching incidents and personal critical incidents. It was found that they have above average level of inquiry urge to find out the reasons for the success or failure of their classes.

Twelve reflective categories were identified in the journal entries made by the pre-service student teachers. These reflective categories were as follows: Clear description of the context, correct identification of the issues, evidence for analysis of the issues, evidence for creative synthesis, consideration of implications of actions, examination of multiple perspectives, making links with society, evidence for learning, evidence for insightful understanding, evidence for changes in beliefs or understanding, plans for revising future practice and evidence for self-awareness.

Many pre-service student teachers reported that they have improved teaching skills in relation to lesson planning, introduction, use of new strategies, materials and activities, classroom management and evaluation through reflective journal writing. They also reported that reflective journal writing helped in the evaluation of teaching methods used - to determine which is suitable; assisted in identifying their strengths and weaknesses in the process of developing as a teacher; trained the mind to think before, during and after the teaching and

learning process; helped in identifying problems and solutions related to teaching; facilitated the process of identifying interesting teaching techniques and activities which could attract students' attention and motivate learning. Reflective journals helped pre-service student teachers to reflect, analyse, evaluate and change their teaching style. They revealed that reflective journals encouraged reflection and thinking, promoted better understanding between teacher and students, and allowed them to discuss issues not yet fully explored in class.

In the beginning of the reflective journal writing, student teachers were observed to be focused largely on descriptive writing. However during the last week of reflective journal writing more student teachers reflected at the higher levels such as descriptive dialogic and critical reflection.

Student teachers stated that reflection helped them look back at their teaching and instruction for the purpose of making appropriate decision based on their experience for future classes. Results showed that student teachers improved their reflective thinking. This indicated that practicing reflective thinking contributed to the development of reflective thinking skills.

Reflective journal writing assisted student teachers in evaluating their teaching, in terms of their strengths and weaknesses in the transaction of lessons. Student teachers considered reflective journal writing as an effective strategy for developing thinking processes such as inquiry, investigation, creativity, decision making choices and drawing appropriate conclusions. It was found that reflective journal writing is an effective means to individualize learning, encourage reflection, helped student teachers to make sense of their experience, tension and pressure release, and build confidence. Student teachers agreed that journal writing strategy integrates the experiences with theory through creating a record of the connections and meanings made during the teaching activities.

Pre-service student teachers have above average level of positive reactions to the journal writing experience. They reported that reflective journal writing has helped them in various ways such as to describe their teaching practice in a thoughtful way, to articulate different events in the class, to identify the problems in the class, to keep the attitudes of open-mindedness, responsibility and whole heartedness in teaching profession, to overcome the weakness in the class, to organize the lesson to be inclusive for all learners, to assess the impact of innovative teaching methods in the class and to find out the remedies for problems in teaching.

There is no significant difference in the mean scores of male and female pre-service student teachers' reactions to the journal writing experience. The language, mathematics, science, and social sciences student teachers' reactions to the journal writing experience differ significantly. Science student teachers were found to have more positive reactions to the journal writing experience than those of social science student teachers. Mathematics student teachers were found to have more positive reactions to the journal writing experience than those of social science student teachers. Language student teachers were found to have more positive reactions to the journal writing experience than those of social science student teachers.

Pre-service student teachers have high level of positive perceptions and good understandings about reflective journal writing. Student teachers believed that reflective journal writing has helped them to identify certain key aspects of their teaching profession and critical analysis of teaching practice helped them to modify their approaches in teaching profession. The results showed that reflective journal writing has helped student teachers to understand certain 'taken for granted assumptions' of their teaching profession and to recollect the challenges that they faced in teaching.

Pre-service student teachers have the characteristics of open-mindedness, responsibility and whole-heartedness respectively at high level. There is no significant difference in the mean scores of male and female student teachers' personal attitude towards reflective journal writing which includes open-mindedness, responsibility and whole-heartedness.

The language, mathematics, science and social sciences student teachers' personal attitude towards reflective journal writing which includes open-mindedness, responsibility and whole-heartedness differ significantly. Science student teachers were found to more open-minded than those of social science and mathematics student teachers and mathematics student teachers were found to more open-minded than those of language student teachers. Science student teachers were found to more responsible than those of language, Mathematics and social science student teachers. Science student teachers were found to more whole-hearted than those of language, social science and Mathematics student teachers and language student teachers were found to more whole-hearted than those of mathematics student teachers.

Pre-service student teachers revealed certain difficulties faced by them during their reflective journal writings like lack of time, loss of interest, mismatch between theory and practice and lack of motivation. Even though the B.Ed. programme lasted for two years, the

student teachers often had to cope with the demands of the course. During the initial weeks all the student teachers wrote their reflective journals punctually. However, after few weeks, some of them began to postpone writings. The student teachers were preoccupied with different activities, preparation for tests, and meeting assignment deadlines.

It was found that some of the student teachers have an inadequate understanding of reflection. They could not provide a proper description of reflection. Several factors prevented pre-service student teachers from systematically engaging in reflection. Some of the student teachers indicated that inadequate in-service training was an impediment for them to reflect. Workload and time have also been raised by almost all of the student teachers as the impediments to reflection. The major factors prevented pre-service student teachers from systematically engaging in reflection and analysing the teaching process are lack of motivation, heavy workload, inadequate collaboration among colleagues, absence of constructive and logical criticism from the mentor teachers, not following the innovations and developments in the professional development, low academic level of students, not taking student expectations and feedback into account when teaching and fear of being criticised by mentor teachers. It was also found that the journal writing became repetitive after certain time for the student teachers.

Student teachers also suggested certain ways to improve journal writing as a method of critical and in-depth analysis of what a teacher does in his or her teaching and enables him/her to decide on future corrective steps to improve practice. According to them it is necessary to give explicit training for the development of skills in reflecting upon their practice. Student teachers can be exposed to the writing of reflective journals during their coursework and discussions with their peers and teacher educators. They can also analyse samples of journal entries or reflective journals since the ultimate goal of reflective journals is to enable pre-service student teachers to reach higher levels of reflective thinking and to produce teachers who will engage in critical reflection independently. Compulsion from the mentor teacher is required for completing the journal entries. If the structure and facilitating questions were explained to students they would find it easy to write reflective journals. Close monitoring from the part of the mentor teacher may act as a motivating factor to continue journal writing. Respecting individuality of the teacher student and not publically commenting negatively upon the journal entries may facilitate journal writing. Real life examples should be highlighted to emphasise the need for reflection in- on and for actions so that the students have an inner motivation to write journals. An attitude of positive self criticisms should be developed among teacher students.

## **Conclusion**

The practice teaching sessions provide pre-service student teachers the opportunity to implement and merge the techniques and strategies that they have been learning in their teacher education programme with the experiences and situations of their practice teaching classrooms in order to become effective teachers. Although through the teaching experiences students learn invaluable lessons, often they are given little to no direction on how to effectively connect, reflect and synthesize what they are experiencing within the walls of the classroom with what they are learning in their teacher education programme (Bates, Ramirez, & Drita, 2009). To make these connections and reach their full potential as teachers, pre-service teachers must acquire the ability to be reflective thinkers. A critically and reflectively thinking teacher should incorporate metacognition in order to inquire about an event or an issue, review the possibilities and choose the best solution for that event or issue. This research project analyzes the changes in process of reflective thinking in pre-service student teachers during sixteen week time frame. It was found that writing in the structured reflective journal enabled them to ponder over the critical incidents that occurred during the teaching practice sessions and viewed it in the wider context of philosophy, sociology and psychology of the teaching and learning process. Pre-service student teachers evaluated themselves and monitored their progress through structured reflective journal writing. This helped students to develop confidence. In the beginning of the reflective journal writing, student teachers were observed to be focused largely on descriptive writing. However during the last week of reflective journal writing more student teachers reflected at the higher levels such as descriptive dialogic and critical reflection. An attitude of positive self criticisms is developed among teacher students.