CHAPTER II
REVIEW OF RELATED LITERATURE AND RESEARCHES

2.1. INTRODUCTION

Research project should be based on all the relevant thinking and research that has proceed it, when completed it becomes a part of accumulated knowledge in the field and so contributes to the thinking and research that follows for any specific project to occupy this place in the development of the discipline the researcher must be thoroughly familiar with both theory and research (Fox D. J. 1969).

According to C. V. Good (1959) a survey of related literature is necessary for proper planning, execution and right concept of the problems and solutions. It provides guiding hypotheses, suggestive methods of investigation and comparative data for interpretative purpose.

It is aimed to understand the methodology of previous studies, gaps, errors in the field, needs and essentialities of the field, avoid duplication and plagiarism. (Best J. W. & Khan 2009).

Once the problem is formulated an extensive literature survey connected with the problem is an important step which helps the researcher in the study. The investigator must be well acquainted with up to date information about what has been thought and done in the particular area from which she intends to take up a problem for research. It not only provides conceptual frame, procedures, source s of data and statistical techniques appropriate for the solution of the problem, it also enables the researcher to avoid the task of duplicating and helps her in the formation for basic theories assumptions and deciding hypothesis.

As the statement of the problems suggests the present study is concerned with Pedagogical content knowledge. The researcher had
decided to review the related studies and literature for better planning and developing teaching performance in Hindi and Marathi teacher trainers. For keeping view of review the related studies the researcher has gone through the following volumes of educational research.

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1. Third survey of research in Education M. B. Bunch, publication Department NCERT Ltd. Link House, Vol. II 1986.
5. University news published by Association Indian Universities.
7. Websites.

2.1 Review of Related literature and Researches.

Taking into consideration the researcher has divided these reviews in sections. These were as below
The researcher has divided this review in following subsections:

2.1.1 Literature Related with teaching performance In India

Teaching performance related articles are taken into consideration for this study. The major variables aspects in this area are as follows:

Singh, N.A. (1985) investigated the effectiveness of the different modes of graduate teacher training prevalent in India such as the four-year integrated B.Ed. and traditional one-year B.Ed. The Points of comparison taken up in the study were attitude, teaching competence and role performance of the teachers trained through these two modes.

Taking into consideration the researcher has divided these reviews in sections. These were as below


Cognitive domain needed Planning, instructing, communicating, managing, Evaluating and subject matter competencies.
Psychomotor domain needed Demonstration, improvising teaching – learning skills and technology usage.
Perceptual domain needed organized demeanor Dynamism, flexibility and creativity.

Nikme. S.C. Momon June (2009) described in article entited The Role of Teaching Competency and Personal Values
Teacher education as a pivot in different programmes of education is responsible for equipping the future teachers with willingness to perform, commitment to dedicate, accountability to shoulder and competency to teach.
Goel D. R. and Goel Chhaya (2011) highlights ‘Current issues in Teacher Education’ the teacher education has been struggling to strengthen its identity. Struggle dose not mean degeneration of values and degeneration of institution.

Quality teachers can be developed through skilled and competent Teacher Education Professionals who have passion for profession Practice teaching is largely primitive.

Bhatia Ranjana (2011) highlights the effectiveness of a teacher in her article entitled ‘Enhancing Teaching: Learning with Technology’ with respect to learning by the students was measured in terms of the traits that the teacher possessed such as:

- **Passion**: That comes with enthusiasm and interest.
- **Creativity**: Making learning of a subject interesting by Encouraging out of box thinking.
- **Flexibility**: Adopting flexible styles of teaching learning.
- **Integrating**: Blending teaching learning with real life situations.
- **Bonding**: Building a trustworthy and loving bond with the students.

Teacher tenure does not have an effect on teacher performance, as measured by student test score gains. Even if we accept the point estimates, the magnitudes of the estimates are too small a percent of the standard deviation of the gain scores sample distribution for tenure to have a truly meaningful impact on student achievement.

With so much recent attention on how education policies can be used to improve teacher quality, it is important to research and understand the effects of policies, such as teacher tenure, that may affect teacher performance. Because these findings suggest that tenure does not impact teacher quality, the goals of a tenure program should be reevaluated. If tenure policies are meant simply to provide job security and protection
for teachers, without affecting their performance, then it may be doing its job.

Mohanty S. B. (2012) Concluded innovations in teaching practice can make schools accept teacher trainees. If the teacher training institutions can ensure that their teacher trainees have adequate content knowledge and skill to teach effectively using varieties of teaching aids, schools shall welcome them. The faculty members of teacher training institutions need to be innovative in their own classroom teaching of theory classes so that the teacher trainees can get inspirations from them. They also need to make schools realize that they can teach better than the school accepting appropriate pre-teaching practice preparation at the teacher training institutions level.

Siddiqui M.A. (2012) Discussed on ‘quality teacher education’ that no reform in teacher education and no improvement in performance in TELs can fully and effectively be accomplished unless the examining and affiliating institutions, universities and state education boards, departments, and state education boards. All out efforts should be launched to bring them on board in the entire teacher education reform campsite. Ensuring that the described curriculum is being implemented in day to day basis in letter and sprit.

2.1.2 Literature related to Teaching Performance in Abroad.

Michael J. Podgurstiy, Mathew G (2007) examined the economic case for performance related Pay in K12 education. The wide dispersion scale value added studies certainly suggests that substantial gains may be possible through – sorting. The evaluation literature on performance related compensation schemes in education is very diverse in terms of incentive design, population, type of incentive strength of study design and duration of the incentive program while the literature how systems
should be designed sufficiently positive to suggest that further experiments.

Lowell Milken, (2000) Holding an advanced degree or teaching more years has carried little weight in terms of improved student achievement and administrative rating of teacher performance. Teachers who possess a valid teaching credential appear to exert some, but by no means an overwhelming effect on student achievement. Since so few of these teacher quality levers are related to student achievement or teacher performance ratings, one wonders why states, districts, and schools use and require them. The bottom line is that simple, efficient, and cost-effective solutions to measure teacher quality have not been fruitful.

Teacher performance-based accountability is only one part of improving teacher quality and for that reason has embedded teacher performance-based accountability within a larger system of reform entitled the Teacher advancement Program.

Jethi R, Kumar B (2007) Studied assessing effectiveness of teaching through student rating. It refers to periodic evaluation of teacher’s performance. It involves a systematic gathering and analysis of information, on the basis of which decisions are taken regarding the effectiveness, efficiency and /or competence of the teachers in realizing set professional goals. Present study shows that teacher’s lack in the areas of teaching methods and instructions feed back from student rating can lead to improvement in teaching effectiveness although student rating are an important source of data for the evaluation of teaching merits.

Punia, B.K., Siwatch Renu (2008) discussed in the article entitled ‘performance evaluation of university faculty by the students’

Whether an employee has shown his or her performance on a given job? Performance indicates how well an individual is fulfilling the job requirements. Performance is measured in terms of results. Thus
performance can be defined as “the record of outcomes produced on a specified job or activity during a specified time. On the basis of judgment, we assess the value of others and identify what is good or bad. In social life, we select tailor, doctor architect, hairdresser through the evaluation of their work. Even when we select any educational institution, its performance vis-à-vis the performance of the faculty working therein helps in our choice. The present study which explores the faculty opinion on student’s evaluation of the teachers (SET) depicts a positive outlook of the university faculty towards the SET.

University academia thinks that evaluation of teachers by the students would have definitely positive effect on teaching quality the system must find its linkage with the faculty promotion policy.

**Gary Carnot, Michelle Cooper (2007)** clearly defined professional responsibilities for teachers constitute the foundation for the teacher evaluation system. The expectations for teacher performance are defined using a two tiered approach. Performance standards and performance indicators. Performance standards refer to the major duties performed by a teacher. These expectations relate to the mane indicators are provided to help teachers and their evaluators clarity job expectations. **David, Macayan (2010)** described the assessment of teacher performance is a routine, mandatory practice in most schools and universities. Its relevance in the context of school accountability on the learning of students cannot be integrated assessment and student outcomes in assessing teacher performance.

Teacher are accountable in the educational process and their assessment serve as one way to monitor and assessment, the performance and effectiveness of teacher can be determined. **Carlos, (2011)** explained that all teachers should have and an professional development plan approved by the administration of the
school they have a contract with. A national and all-purpose regulation has to exist, providing that the focus of teacher performance evaluation is the improvement of individual professional development, teaching practices and teacher effectiveness.

2.1.3 Literature related to Pedagogical Content Knowledge in India:

Literature related to Pedagogical Content Knowledge is as follows. **Saungoh, S. M. (2005)** in his article entitled as ‘Quality issues in Teacher Education’ discussed some of the issues which need to be considered in teacher education. One of them is lack of subject knowledge. The B. Ed. Programme does not totally emphasize the knowledge of the basic subject. There is no provision to increase and strengthen the knowledge of particular subjects of the student teacher. The whole teaching practice remains indifferent with regard to the subject knowledge of the student teacher.

Another is crisis of values and morality. There is persistent erosion of values in the society. In the resent day context certain values need to be redefined and reinstalled. It is through education and as of necessity through teacher education programmes that the task of inculcating values can be substantially accomplished.

**Zayapragassarazan, Z. (2005)** has focused on ‘Emerging Challenges in Teacher Education.’ Quality education should result in students acquiring necessary competencies as an outcome of their education. Today’s students requires cognitive competencies like communicating effectively, met cognitive competence’s such as self evaluation, social competencies such as leading discussions and conversions, cooperating, and working in group.

**Pichad Nalini, Barkale Ramdas (2005)** explained the pedagogical Analysis of content in Marathi subject. The planning co-relates with content Teacher has to classify the whole content according to unit’s
subject matter. There are many kinds in prose as like story, novel, drama, narration, essay tec. Teacher must have the knowledge about the content, style of thinking then he l she will communicate with students effectively.

Kshetri, (2008) has described teacher empowerment as investing teachers with the right to participate in the determination of school goals. He explains the role of content knowledge and pedagogical content knowledge for empowering a teacher. Teacher cannot said to have acquired mastery of a content knowledge until he/she developed an insight into the process by which such mastery is gained. PCK represents blending of content and methodology into an understanding of how particular topics, problems or issues are organized.

Jagtap, H. N. (1986) in this article entitled, refocused on inclusion of concept of content cum methodology in teacher training programme. Along with various teaching skills and teaching methods teacher trainee should be aware with pedagogical knowledge this is possible only through content cum methodology. Through CCM teacher trainee able to analyze the content, select the appropriate teaching method and select proper knowledge representations.

He also explained concept and objectives of content cum methodology also focuses on various components of content cum methodology.

2.1.4 Literature Related with Pedagogical Content Knowledge in Abroad

Literature related with pedagogical content knowledge in abroad is taken into consideration for this study. It is as follows:

McNeil (1986) has pointed several types of defensive teaching and teachers uses following strategies when they doubt student interest or abilities to understand the topic
1. Fragmentation: Reduction of any topic to fragments. No one is called upon to synthesize or give a picture of interrelationship.

2. Omission: Omit difficult or complicated issues from discussion.

3. Defensive simplification: Teachers win the student compliance on a lesson by promising that it will not be difficult and will not go into any depth.

Shulman (1987) introduced the phrase pedagogical content knowledge and sparked a whole new wave of scholarly articles on teacher’s knowledge of their subject matter and the importance of this knowledge for successful teaching. Teachers need to understand subject matter deeply and flexibly so they can help students create useful cognitive maps relate one idea to another and address misconceptions. Teachers need to see how ideas connect across fields and to everyday life.

McLaughlin and Talbert (1993) has emphasized on teaching for understanding. It requires change not only in what is taught but also in comprehensive and in depth knowledge of subject matter competence in representation and manipulation of this knowledge in instructional activities and skill in managing classroom processes in a way that enables active student learning. Teachers also must understand how their students think as well as what they know. This more complex approach to teaching requires that teacher combine deep knowledge of subject matter and wide repertoire of teaching strategies with intimate knowledge of students, growth, experience and development.

Rovegno, Lnez (1994) in his article entitled teaching within a curricular zone a safety: School culture and situated nature of student teacher pedagogical content knowledge described PCK, one of the seven categories of teacher knowledge base, as that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding. He focuses on teaching requires a
substantial wide range of knowledge base, but that teacher must known their subject matter in ways that surpass what other subject area experts would need to know teacher must also possess pedagogical content knowledge.

Mathew (2001) focuses the idea of PCK. PCK is consistent with and similar Shulmans idea of knowledge of pedagogy that is an applicable the teaching of specific content. This knowledge includes knowing what teaching approaches fit the content and likewise knowing how elements of the content can be arranged for better teaching this knowledge is different from the knowledge of a disciplinary expert and also form the general pedagogical knowledge shared by teacher accords disciplines.

PCK is concerned with representation and formulation of concepts pedagogical techniques knowledge of what makes concepts difficult or easy to learn knowledge of student’s prior knowledge and theories of epistemology.

Raticiffe, Mary (2004) has highlights need of pedagogical content knowledge for teaching concept of the nature of science. There may be links between engaging students effectively and specific teaching approaches rather than just teachers understanding of the subject. Pedagogical content knowledge needed to teach established science concepts. He focused on mapping of teacher content representation to pedagogical and professional experience repertoires help unpack the teacher pedagogical reasoning, that is the thinking and reasoning of science teacher in teaching a specific aspect of the science content.

Balli, D.L and Thames, M.H (2008) has discussed next steps needed to develop a useful theory of content knowledge for teaching. They focuses on two empirically discernible sub domain within pedagogical content knowledge (knowledge of content and students,
knowledge of content and teaching) and an important sub domain of pure content. Knowledge unique to the work of teaching, specialized content knowledge which is distance from the common content knowledge which is distance from the common content knowledge needed by teacher and non teachers a like

2.2 Review of related researches

2.2.1 Researches related teaching performance in India.

**Joshi A.N. (1984)** – Studied Developing Performance Criteria and testing their efficiency in training student teachers in a teaching skill. The transcripts of 318 recorded microteaching lessons were analyzed with the help of Moves in Interactive strategies of Teaching (MIST). On the basis of these, data exercises were made to fix the minimum performance criterion for each skill, to find out the relationships between planning and performance, to determine the bearings of performance critique procedure. The coefficients of correlation between completely translated planning (CTP) and performance varied from 0.61 to 0.83 for the skills of Reacting, Questioning and Initiation, and Response (RQ1). The minimum performance criteria for RQ1 skills were determined as 32, 56 and 90 per cent respectively. The high performers in RQ1 skill cluster were not always significantly higher in all the components of the skill.

**Mohanty S.B. (1984)** – Studied the provisions of student teaching program in colleges of education in respect of objectives, prepractice teaching preparation, practice teaching, supervision, evaluation, school/college cooperation, resources and innovation, and innovations in student teaching program. The findings of the study were: 1. Training in techniques of observation, maintenance of classroom discipline and organization of functions and festivals were found in all colleges. 2. The manner in which criticism lessons were held was not proper. 3. Various methods of teaching were not used in teaching lessons. 4. The practice
teaching program stressed delivery of lessons and not other activities expected from a student teacher.

Kulkarni K.D. (1984) has focused on ‘Individualized study’, Individualized study can be encouraged for better results. It is possible to give individual guidance even while using self learning material and such guidance scheme can be worked out.

Rao V.K. (2004) has focused on 'teaching performance' Teaching performance refer to the conduct of instruction : Posing question, providing explanation, giving directions, showing approval, engaging in the myriad instructional act that a teacher performance in the classroom. A perspective on this issue is imperative because practice, especially when defined broadly to include general classroom teaching. Whatever the values, shortcomings, or irrelevancies of the teacher education program, it is held to be through practice that one really learns to teach. The actual role performance of college supervisors on evaluation, skill development, and guidance role was significantly different from their performance on academic role according to the ratings of student-teachers.

More K.S. (2006) studied the effect of lesson planning according to content on the classroom teaching of the Marathi teacher-trainees. The study concluded that the lesson planning according to content is effective for teaching. Significant relationship in the content based thinking and effective teaching.

Prabhune P.P., Marathe A.H. and Sohani C.R. (1984) Studied the efficacy of the three different strategies of feedback on the student teachers performance with respect to teaching, was inferred that the practice of microteaching skills was effective in the improvement of the student teachers performance with respect to teaching.
Rajguru A.R. (1988) studied the role and performance of central school headmasters. And found that they did help the primary school teachers but were not satisfied with observation lessons.

Sabharwal (1991) – Studied prediction of student teacher performance in secondary teacher Education Course. It is an attempt to study and predict student – teacher performance as related to selected variables. None of the non cognitive variables emerged as significant predictors of performance in the total assessment of theory and total assessment.

Vyas, J.S. (1991) evaluated the effect vines of the program of mass orientation of school teachers and found that performance of teachers covered under the program was better than those who were not oriented.

Natiyal.A.K. (1992) studied the efficiency of teacher’s performance as related to their values, effectiveness, morals and students perceived teacher characteristics. It attempts to study the efficiency of Teaching Performance as related to their Values. Effectiveness, morale and teacher characteristics as perceived by students.

Kartik, Vekatesh (2009) resulted a randomized evaluation of a teacher incentive program. The program provided bonus payment of their students test scores in independently administrated learning assessments. They scored significantly higher on “Conceptual” as well as “mechanical” components of the tests, suggesting that the gains in test scores represented an actual increase in learning outcomes. Incentive schools also performed better on subjects for which there were no incentives, suggesting positive spillovers.

Pawar Anand (2011) studied the impact of teacher training on teacher competencies. The impact of teacher – training have to be evaluated, its effectiveness, and the outcome exhibited through teaching learning process.
The study was a comparative in nature and done between two streams of training modes in building teacher competencies and also to now the competency level between trained and untrained teachers and finally to know the impact of teacher training on teacher competencies.

2.2.2 Researches related to teaching performance in abroad


Iba Bassey.G.S (1990) examined the relationship between the entry qualifications of Student Teachers and their performance in the design and production of instructional material and concluded that post remedial group of students did show marked improvement.

Victor Lavy (1999) Proposals to use teachers’ performance incentives as the basis for school reforms have recently attracted considerable attention and support among researchers and policy makers. The main message is that the most likely way to improve students’ achievements is to institute performance incentives, direct monetary rewards for improvements in student outcomes. However, there has been very little experience with applying performance incentives in schools. This paper provides empirical evidence on the causal effect of a program that offered monetary incentives to teachers as a function of their students’ achievements.

Kimball (2002) developed a standards based teacher evaluation process that emphasizes feedback to teachers as well as clear standards for performance. The new evaluation system has resulted to change to evaluation procedures and out comes. Difference from the prior
evaluation system included more formal, structured dialogue around common standards, a for teachers and mutual input into evaluation process.

**Schacter John (2007)** has identified teacher quality as the most important variable in increasing student achievement. Proposes that by implementing rigorous teacher performance based accountability systems.

Teacher quality can be defined, leading to targeted professional development to improve teachers teaching practice and student achievement.

**Paulsen Michael (2007)** Examined concepts, principles, and practices of effective contemporary approaches for evaluating faculty teaching performance. The roles of rewards, disciplinary perspectives, and institutional teaching cultures in the development of effective teaching evaluation systems were considered from a variety of perspectives.

**Verceles and Rivera (2010)** studied the faculty teaching performance profile of 78 DMMMSC college of education faculty from school. The conclusion are drawn as follows

A) The college of education can pride itself having very satisfactorily competent teachers.

B) Male and female college of education faculty did not significantly differ in teaching performance.

C) The Educational attainment of faculty does not significantly affect their teaching performance.

**2.2.3 Researches Related with pedagogical content knowledge in India.**

The researches related to pedagogical content knowledge package development.
Joshi, M.G (1972) has critically studied General Science textbook purposed to examine whether the content of the textbook was suitable to age and understanding level of pupils, along with suitability of the explanations and illustrations provided in the textbook. The study was carried out adopting the technique on content analysis.

On this he been concluded that the weightage given to the objectives of developing scientific skills and appreciation of science needed to be increased and weightage for the knowledge objective reduced proportionately.

Kher, S.V. (1972) has critically studied history textbook purposed to find out how far it helped in achieving the objectives of teaching History as mentioned in the prescribed syllabus and extent to which the textbook was helpful in creating an awareness of difference in values of the past and present. He conducted survey using questionnaire of 150 schools in Dhula district. In support of this interviews of 150 teachers, 40 parents and 25 subject expert. On this he has been concluded that the textbook was helpful in creating the awareness of social heritage and developing patriotism and emotional integration among the pupils.

Rao P.T. (1987) has analytically studied classroom teaching of effective science teacher purposed to identify effective science teacher on the basis of selected criteria and to analyze the teacher behavior of selected effective science teacher with respect to their content processing behavior, interactive behavior and teaching skill behavior.

He conducted survey using criterion achievement Test with verbal and non verbal components of teaching skill. In support of thesis Hough and Duncan observation system for instruction analysis on 215 secondary school teacher, 54 secondary school and 17 effective teachers. On this he has been concluded that among the content Processes employed by the effective science teachers to process the components of content
irrespective of the topics and subject, analysis and assumption content processes were found in common with the entire teacher.

**Singh, Umesh (1995)** has studied material relating to video instructional package for teaching environmental awareness. He conducted field analysis used in 3 schools of Gujarat, UP and Rajasthan. The study was reported that students enjoyed working through video package.

**Basavaya, Patanik (1997)** has developed a training package in mathematics for primary teacher educators based on the difficulties of students and problems of teacher. It covered the objectives, guidelines for trainers, and schedule for organizing 5 days programme.

**Raghvan (1997)** has developed a training package for teachers based on the identification of teaching learning difficulties in mathematics in class I Of tamil nadu schools. The study was aimed at identifying the hard spots in mathematic for class I Students. So that intervention could be planned to overcome the deficiencies. It was found that training programme could reduce hard spots substantially as could be seen from the noticeable improvement in the performance of the students.

**Das, S.K (1996)** has critically studied secondary school textbooks purposed to examine the scope of value education prevalent procedure has been used as major technique. On this he has been concluded that all subjects taken together represented 166 values except parent teacher relationship. Postural care, Social value forgiving spiritual value. Some values like service to others, cooperation, helpfulness have been over emphasized. There has been no direct indication of values in the textbook of secondary schools.

**Amlraj, A.(1999)** has critically studied physics content of science textbook of classes VI to VII purposed to find out how far physics content promote value. The study reported that the values promoted were
intellectual values (creativity), personal values (alertness, cleanliness). However, textbook does not promote social values like cooperation, punctuality.

Patil. S.K (2006) at shivaji University, Kolhapur studied development of social competencies for fourth year B.A.B.Ed. student teacher purposed to develop a package for promoting social competencies and finding out the use of social competency package in developing the 18 competencies among student teacher she Conducted ex per mental method on 131 student teacher sample using social competency scale, social profile of student teacher and social competency package. On this he has been investigated that response of student teacher towards social sensitivity showed significant increase in average score from 12.37 to 19.61 and concluded that social competency package proved useful for B.A.B.Ed. student teacher to increase awareness about social competency.

On this he has concluded that there is significant relationship between emotional maturity and academic achievement of postgraduate students

Bhalvankar, A. G. (1996) has suggested new research areas related to content cum methodology. He also explains how the content knowledge is vital for effective teaching.

It is possible to analyze the content in accordance with cognitive, affective and psychomotor domain. It means clear and deep cognitive structure will helpful for effective teaching. Teacher should point out effect of his beliefs and values on teaching.

Kshatriya (2011) Find out the Significant difference between the achievement of two group pupil teacher (2) Pupil teacher became aware of the importance of contain cum methodology. (3) Pupil teacher started to differentiate traditional method of teaching and contain cum
methodology. (4) The study revealed that contain cum methodology can be used as a technique effectively in rural area.

Developed Content cum methodology of teaching helped the all 30 students. Developed Content cum methodology of teaching helped the 30 students from experimental group in performing better.

2.2.4 Researches related with pedagogical content knowledge in Abroad

The researchers related to pedagogical content knowledge.

Brown (1975) reported on the evaluation of Affective Education Program. He state that students with an affectively trained team improved significantly over a comparison group in reading as measured by silent reading comprehension test, that in a four month period students in the affective group were absent from school nearly half as often and tardy less than one third as comparison group student said that parents were enthusiastic about the effects of the program on their children.

Gudmundsdottir (1987) Studied PCK of two secondary English teachers purposed to how these teachers characterized their knowledge about their discipline and how they restructured that knowledge for the purpose of teaching it. He conducted descriptive study using classroom observation. In support of this 3 interviews were conducted. On this he investigated that there is no any indication that the teachers were taught to organize their content knowledge in that way. Instead they invented that model themselves.

Ennis Muellar and Zhu, Walkwitz (1992) has focuses on research employing design such as concept mapping and stimulated recall interviews suggest that knowledge concepts and structure become more advanced as individuals gain training and experience and are influenced by both teacher educators.
**Reinhardt (1993)** has critically analyzed 10 randomly selected lessons. He found that teacher explanation were about different kinds of content and explanation of event and structure were often blocked

- 25% teacher’s explanations blocked
- 22% event theme combinations
- 20% about themes
- 4% structure
- 5% met systems

**Lee, P (1995)** provides an example of case study on this he has been found that limited knowledge of science combined with values for control and discipline makes the teacher depend on textbook and avoid discussion and other whole activities.

**Lipping, Mas (1999)** describes the knowledge package that is the part of the knowledge of the 72 Chinese elementary teachers whom she interviewed

This knowledge package consisted of

1)  Key ideas that Weigh more than other ideas in the package.
2)  Sequence for developing the ideas.
3)  Concept Knots that link crucially related ideas.

A particularly generative form of and structure of PCK key in her notion of mathematical knowledge for teaching is a kind of culturally situated and curricular structuring of the content that readies it for teaching by identifying central ideas and their conception. The idea of PCK substantially improves our understanding of the knowledge required for teaching. The concept implies that not only must teachers know content deeply, know the conceptions among ideas, but also must know the representation for and the common student difficulties with particular ideas. That concept makes clear that knowledge of mathematics for
teaching encompasses more than what is taught and learned in conventional mathematics course

**Lneke, Henze and Jan, Driel (2007)** Has studied science teachers knowledge about teaching models and modeling in the context of a new syllabus on public understanding of science aimed at identifying patterns in the content and the structure of science teacher knowledge. They investigated 3 domains of teacher knowledge. Teacher pedagogical knowledge subject matter knowledge and general pedagogical knowledge. A structured interview and a questionnaire were used. From the analysis of the data, two types of teacher knowledge emerged. One of the types was more integrated and more extended in terms of PCK. Teachers who represented this type of knowledge had developed PCK that connected the various programme domains of the new science subjects. In both types PCK was found to be consistent with general pedagogical knowledge.

The review of researches and literature related to teaching performance and pedagogical content knowledge corresponding to limited context of present study is helpful to understand the background of problem and its manipulation with objectives of study. Here the summary of related researches literature is extended with discussion regarding aspects of present study.

### 2.3 Discussion about review of related Literature and researchers

Thus the review of related literature and researches it has seen that there was a need of training on Pedagogical content knowledge in teacher education training program. There are weaknesses in teaching abilities, uses of teaching stragies and teaching techniques and teaching skill also. This situation showed the need of training in Pedagogical Content Knowledge which covered all these aspect with are essential for the effective teaching. Taking into consideration these views researcher has
selected this area in teacher education program and tried to found the solution of problem.

Thus through these reviews it has seen that there was a need of training for general teaching in pre service training programme and to the teachers who are teaching Hindi and Marathi in the secondary schools. Taking into consideration there views researcher has selected the sample and Experimental methodology and tried to found the solution of problem.

2.4 Summery of related literature and researchers:

Table showing the sections of reviewed related literature and researches:

| Table No.2.1 |
| Summary of literature and researches related with teaching performance. |

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable / Aspects</th>
<th>Researchers</th>
<th>Applications to present study</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Role Performance</td>
<td>Teprongtong, s (1984)</td>
<td>Academic role performance according to the ratings of student-teachers.</td>
</tr>
<tr>
<td>3</td>
<td>Student teaching program</td>
<td>Mohanty S.B. (1984)</td>
<td>Practice teaching program stressed delivery of lesson</td>
</tr>
<tr>
<td>6</td>
<td>Teacher training</td>
<td>Singh N.A. (1985)</td>
<td>Effectiveness of teacher training</td>
</tr>
<tr>
<td>8</td>
<td>Student teacher performance</td>
<td>Iba, Bassey G.S (1990)</td>
<td>Entry qualifications of student teachers and their performance marked improvement</td>
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<tr>
<td>10</td>
<td>Teacher performance</td>
<td>Vyas, J.S (1991)</td>
<td>Mas orientation program is better for teacher performance</td>
</tr>
<tr>
<td>14</td>
<td>Teacher evaluation process</td>
<td>Kimball (2002)</td>
<td>Feedback to teachers as well as clear standards for performance</td>
</tr>
<tr>
<td>15</td>
<td>Teaching performance</td>
<td>Rao, V.K (2004)</td>
<td>Teaching performance refers to conduct the instruction</td>
</tr>
<tr>
<td>16</td>
<td>Teacher quality</td>
<td>Schacter John (2007)</td>
<td>Important variable in increasing student achievement.</td>
</tr>
<tr>
<td>17</td>
<td>Evaluating Teaching performance</td>
<td>Michael Paulsen(2007)</td>
<td>Development of effective teaching evaluation system</td>
</tr>
<tr>
<td>18</td>
<td>Performance related pay</td>
<td>Michael, J. Mathew,G. (2007)</td>
<td>Substantial gains may be possible through-sorting</td>
</tr>
<tr>
<td>22</td>
<td>Teaching competency</td>
<td>Nikme, S.C. (2009)</td>
<td>Demonstrate an ability equally to perform</td>
</tr>
<tr>
<td>23</td>
<td>Evaluation of teacher incentive program</td>
<td>Kartik (2009)</td>
<td>Incentive schools performed better on subjects</td>
</tr>
<tr>
<td>24</td>
<td>Needed competencies for teacher</td>
<td>Pandey, Bardwaj(2010)</td>
<td>Quality and extent of learner achievement are determined primarily by teacher competence</td>
</tr>
<tr>
<td>Sr. No.</td>
<td>Variable/Aspects</td>
<td>Researchers</td>
<td>Applications to present study.</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------</td>
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<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Content of textbook</td>
<td>Joshi M.G. (1972)</td>
<td>Adopting the technique on content analysis</td>
</tr>
<tr>
<td>2</td>
<td>How far textbook helped the objectives of teaching.</td>
<td>Kher S.V. (1972)</td>
<td>Textbook was helpful in creating an awareness of social heritage and developing patriotism and emotional interaction among the pupils.</td>
</tr>
<tr>
<td>3</td>
<td>Affective education program</td>
<td>Brown (1975)</td>
<td>Parents were enthusiastic about the effect of the program on their children.</td>
</tr>
<tr>
<td>4</td>
<td>Defensive teaching and teachers</td>
<td>McNeil (1986)</td>
<td>Teacher wins the student compliance on a lesson</td>
</tr>
</tbody>
</table>

**Table No. 2.2**

Summary of literature and researches related with pedagogical content knowledge.
<table>
<thead>
<tr>
<th></th>
<th>Concept of content cum methodology in teacher training program.</th>
<th>Pedagogical content knowledge</th>
<th>Classroom teaching of effective science teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Various components of content cum methodology</td>
<td>Importance of PCK for successful teaching.</td>
<td>Behaviour of effective teachers to process the components of content.</td>
</tr>
<tr>
<td>6</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>PCK of secondary teachers</td>
<td>Gudmundsdottir (1987)</td>
<td>No any indication that the teachers were taught to organize their content knowledge in that way</td>
</tr>
<tr>
<td>8</td>
<td>Knowledge concept and structure</td>
<td>Ennis, Mueller and Zhu, Walkwitz (1992)</td>
<td>Knowledge concept and structure become more advanced an individual’s gain training and experiences.</td>
</tr>
<tr>
<td>9</td>
<td>Teaching for understanding</td>
<td>McLaughin, Talbert (1993)</td>
<td>Teaching requires that teacher combine deep knowledge of subject matter and wide repertoire of teaching strategies with intimate knowledge of students, growth, experience and development.</td>
</tr>
<tr>
<td>10</td>
<td>Teacher explanation were about</td>
<td>Reinhardt (1993)</td>
<td>Teacher explanation Different kinds of content and explanation.</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Content and Pedagogy that is uniquely the province of teachers</td>
<td>Rovegno, Lnez (1994)</td>
<td>Teaching requires a substantial wide range of knowledge base.</td>
</tr>
<tr>
<td>14</td>
<td>Limited knowledge of science</td>
<td>Lee, P. (1995)</td>
<td>Limited knowledge combined with values for control and discipline makes the teacher depend on textbook</td>
</tr>
<tr>
<td>17</td>
<td>Difficulties of student and problems of teacher</td>
<td>Basavayya, patanik (1997)</td>
<td>A training package in mathematics</td>
</tr>
<tr>
<td></td>
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<td>--------------------------------------------------------</td>
</tr>
<tr>
<td>20</td>
<td>Knowledge Package</td>
<td>Lipping, Mas (1999)</td>
<td>The idea of PCK substantially improves our understanding of the knowledge required for teaching.</td>
</tr>
<tr>
<td>21</td>
<td>Idea of PCK</td>
<td>Mathew (2001)</td>
<td>Knowing what teaching approaches fit the content and likewise knowing how elements of the content can be arranged for better teacher.</td>
</tr>
<tr>
<td>23</td>
<td>Quality issues in teacher education</td>
<td>Saungho, s. M. (2005)</td>
<td>Lack of subject knowledge. The whole teaching practice remains indifferent with regard to the subject knowledge of the student teacher.</td>
</tr>
<tr>
<td>24</td>
<td>Pedagogical Analysis</td>
<td>Pichad, N. barkale R (2005)</td>
<td>Teacher must have the knowledge about the content, style of thinking.</td>
</tr>
<tr>
<td>27</td>
<td>Science teacher knowledge</td>
<td>Lneke, Henze and Jan, Driel (2007)</td>
<td>In both types PCK was found to be consistent with general pedagogical knowledge.</td>
</tr>
<tr>
<td>28</td>
<td>Teacher empowerment</td>
<td>Kshetri, B. (2008)</td>
<td>Role of content knowledge and pedagogical content knowledge for empowering a teacher</td>
</tr>
<tr>
<td>29</td>
<td>Theory of content knowledge for teaching</td>
<td>Balli, d. L. Thames. M.H. (2008)</td>
<td>Knowledge unique to the work of teaching. Specialized content knowledge which is distance from the common content knowledge needed by teacher.</td>
</tr>
</tbody>
</table>
In this second chapter researcher has presented the review of related literature and researches with respect to pedagogical content knowledge and teaching performance.

In the next chapter researcher has described the research methodology and actual process of research.