Chapter – VI

SUMMARY, CONCLUSIONS
AND RECOMMENDATIONS

The key problem of education is how to produce concern of contemporary education with the goals of individual as well as social development? The issues regarding qualitative and quantitative growth of education are in the interest of researcher, thinkers, faculty, administrators and policy makers. Due to this various new trends are emerging in the field of education. These trends are probing diversified areas of education to attempt highest goals of education.

'Education' is not a narrow metaphor related to some one’s attainment of high score in some examination it's true significance lies in the making of man and development of a just humane society. It is aimed to nurture human intelligence, that will engage itself in creation of harmonious, peaceful and constructive life on the earth. This new kind of intelligence is now popular as 'Social Intelligence.'

Originally, the term "Social Intelligence" was proposed by Thorndike (1920) in his theory of multiple intelligence. It is an inclusive construct and doesn't allow to loose the conventional meaning of intelligence but it enable one to successfully practice his intelligence in constructive ways for sake himself as well as society.

According to Howard Gardner, “Social intelligence is ability to know oneself and to know other in an alienable part of human conditions as the capacity to know objects and sound and it deserve to be investigated no less than these others.”

Social intelligence no doubt is interesting idea, but not simple. It is wide, extensive as well as intensive and complex too. It produces many of questions like: When it begins? How it grows? What are the means and methods to develop it? and again how to educate the people? These questions are not only correspondent with psychologist, it is equally, likely challenge for social scientist, Neurobiologist, Educationist and experts as many faculties. This challenge requires a firm base of researcher in psychology, sociology and basically in Education.

Theoretical basis of Social Intelligence is also found in the theories of intelligence. The question of Educating Social intelligence may be solved through researches based on the theories of Human development intelligence, personality, learning-teaching and theories of classroom practices. It needs research based rationale for classroom teaching because social intelligence cannot be considered an isolated task than regular teaching practices. No doubt that present curriculum, text books and practices also nurture and nourish social intelligence to some extent. Here, it is important to think that, how we
can motivate the practices of Educating Social intelligence consciously, systematically resulting in to the expected outcomes.


Present study has probed into the area of social intelligence by connecting it with pedagogical content knowledge (Shulman, 1986). The study has been proceed through development of social intelligence based pedagogical content knowledge package and assessing its effectiveness by experimentation.

6.1 Summary

This chapter restate the statement of problems, objectives of study, need and significance, limitations and scope, the methodology in abstract. The conclusions with respect to objectives and hypotheses are given in this chapter with inclusive discussion. The chapter is concluded with the recommendations and topics for further study evolved through discussion.

The statement of the problem was as follows:

6.1.1 Statement of the Problem

Development of pedagogical content knowledge package for teacher trainees to enhance social intelligence among secondary school pupils.

6.1.2 Definitions of Technical Terms

6.1.2.1 Conceptional Definition of Technical Terms

1. Development

The act or the process of developing where develop means to evolve to a higher or more useful stage.

(New Webster's Dictionary, 2000)

2. Pedagogical Content Knowledge

Pedagogical content knowledge identifies the distinctive bodies of knowledge for teaching. It represents blending of content and pedagogy into an understanding of how particular topics, problems or issues are organized, represented and adapted to the diverse interest and abilities of learners and presented for instruction.
Pedagogical content knowledge is the category most likely to distinguish the understanding of content specialist from the of pedagogue.

(Shulman, 1987)

3 Package
A number of items, plans, offered or proposed as an inseparable unit.

(Webster New Word, College Dictionary, 2004)
A self contained component or unit usually one that is already assemble.

(Webster New Word, College Dictionary, 2004)

4. Enhance
Increase or extend the quality or value.

(Oxford Dictionary, 2007)

5. Teacher Trainee
Participant in vocational, administrative or technical training program for the purpose of acquiring and developing job related skills.

6. Social Intelligence
Social intelligence means qualities of –

v) Seeing through the social myths and diversion.

vi) Understanding the necessity of life long self education.

vii) Recognising the necessity of social action including discerning what the social situation requires and creating a program to realize social form.

viii) Developing genuine feeling of compassion and regard for one's fellow human being.

7. Pupil
A younger child attending school, usually elementary school; also a synonym for student or an older person of any age being taught in individuals private lessons with singing or instrumental performance in music.

(Encyclopedic Dictionary of Education, Vol. 3)
6.1.2.2 Operational Definition of Technical Terms

1. Development
The act of defining, developing, evaluating and reconstructing the prepared pedagogical content knowledge package and finding its usefulness, effectiveness with respect to IX standard pupils; is development of pedagogical content knowledge package for this present study.

2. Pedagogical Content Knowledge
In present study researcher uses this term synonymous with Shulmans concept of Pedagogical Content Knowledge only the difference is that a term content which is used in pedagogical content knowledge that refer the researcher for preparing the social intelligence content.

3. Package
This package includes set of teaching skills, techniques, methods, teaching aid for enhancing social intelligence among IX standard pupils of Marathi medium. It consists of –

vi) Preliminary Part
vii) Part – I : Social Intelligence, Meaning, Nature and Types
viii) Part – II : Pedagogical Content Knowledge
ix) Part – III : Integrated Lesson Planning based on Pedagogical Content Knowledge with reference to social intelligence
x) Glossary, Activities etc.

4. Teacher Trainee
Teacher trainee who are learning to teach and have undertaken one year B. Ed. course in the College of Education affiliated to Shivaji University, Kolhapur (Maharashtra) during the academic year 2009-10.

The teacher trainees admitted in Modern College of Education, Malkapur, Karad, Dist. Satara (Maharashtra) for academic year 2009-10 for Marathi, Science and History subject as the teaching methodology.

5. Enhance
To attempt to develop or to promote the social intelligence of IXth standard pupils. This process of development is concern with one's ability to relate to others in a socially appropriate meaningful way.

A group of set of intelligence which will enable pupils for healthy interpersonal relation.
6. Social Intelligence

In this study social intelligence restricted with following components which are operationally defined in Social Intelligence Scale by N. K. Chadha.

I) Patience
J) Cooperativeness
K) Confidence Level
L) Sensitivity
M) Recognition of Social Environment
N) Tactfulness
O) Sense of Humour
P) Memory

7. Pupil

A students of Anandrao Chavan Secondary and Higher Secondary School, Malkapur, Karad, Dist. Satara (Maharashtra) in IXth standard for academic year 2009-10 having Marathi as medium of instruction.

6.1.3 Need and Significance of the Study

The enhancement of social intelligence among the secondary school students is linked with teachers pedagogical content knowledge in respected to their subjects. The researcher has selected three subjects Marathi, Science and History representing Languages and Literature, Sciences and Social Sciences to assess the ability to enhance social intelligence through their subject contents.

The study is directed to package development for training of teacher trainees of B. Ed. course. These teacher trainees are being trained to skills, techniques models and methodology of particular school subject. So, it can be considered that they are having essential pedagogical content knowledge to integrate component of social intelligence for purpose of teaching. They have provided opportunity to practice the teaching based on social intelligence in simulated as well as real classroom teaching. Therefore, the effectiveness of package may be assessed through changing level of social intelligence of secondary school pupils.

The study will provide a rational as well as empirical base to practice of enhancement of social intelligence in normal classroom situation through teaching activities. It explores the potential of syllabi and textbooks in this regardance. Also, the study justifies that inculcation of social intelligence is not a specific task based on specific content and performed by special teacher.
There are very few studies in the area of social intelligence or pedagogical content knowledge in India context (NCERT, 2006). Sixth Survey of Educational researches included four Ph. D. studies in its second volume (Agarwal, 2002).

6.1.4 **Objectives of the Study**

1. To identify the content related to social intelligence in IXth standard textbooks of Marathi, Science and History subject.
2. To develop a pedagogical content knowledge package for enhancing social intelligence among IXth standard pupils.
3. To find out the effectiveness of developed pedagogical content knowledge package for enhancement of social intelligence among IXth standard pupils.
4. To find out the effectiveness of developed pedagogical content knowledge package on the scholastic achievement of IXth standard pupils related to content of Marathi, Science and History subjects.
5. To find out the correlation between scholastic achievement and social intelligence of IXth standard pupils.

6.1.5 **Assumptions**

1. Each individual is a socially intelligent to a certain degree.
2. Social intelligence is essential component of pupil development.
3. Social intelligence can be measured.
4. Social intelligence can be enhanced through education.

6.1.6 **Research Hypotheses**

1. Pedagogical content knowledge package significantly enhances social intelligence of B. Ed. teacher trainees.
2. Pedagogical content knowledge package significantly enhances social intelligence of IX standard pupils.
3. Pedagogical content knowledge package significantly enhances scholastic achievement of IX standard Pupils.
4. There is correlation between social intelligence and scholastic achievement of IX standard pupils.
These research hypotheses are concerned to the following null hypotheses:

**6.1.6.1 Null Hypothesis Related to Pre-Test of Social Intelligence of B. Ed. teacher trainees**

1. There is no significant difference between pre-test score of social intelligence of experimental and control group of B. Ed. teacher trainees.

2. There is no significant difference between pre-test score of patience as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

3. There is no significant difference between pre-test score of cooperativeness as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

4. There is no significant difference between pre-test score of confidence level as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

5. There is no significant difference between pre-test score of sensitivity as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

6. There is no significant difference between pre-test score of recognition of social environment as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

7. There is no significant difference between pre-test score of tactfulness as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

8. There is no significant difference between pre-test score of sense of humour as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

9. There is no significant difference between pre-test score of memory as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.
6.1.6.2 Null Hypothesis Related to Pre-Test of Intelligence Quotient (IQ) and General Teaching Competency (GTC) of B. Ed. teacher trainees

1. There is no significant difference between experimental and control group of B. Ed. teacher trainees in pre-testing of IQ.

2. There is no significant difference between experimental and control group of B. Ed. teacher trainees in pre-testing of GTC.

6.1.6.3 Null Hypothesis Related to Post-Test of Social Intelligence of B. Ed. teacher trainees

1. There is no significant difference between post-test score of social intelligence of experimental and control group of B. Ed. teacher trainees.

2. There is no significant difference between post-test score of patience as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

3. There is no significant difference between post-test score of cooperativeness as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

4. There is no significant difference between post-test score of confidence level as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

5. There is no significant difference between post-test score of sensitivity as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

6. There is no significant difference between post-test score of recognition of social environment as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

7. There is no significant difference between post-test score of tactfulness as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

8. There is no significant difference between post-test score of sense of humour as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.
9. There is no significant difference between post-test score of memory as a component of social intelligence of experimental and control group of B. Ed. teacher trainees.

6.1.6. 4 Null Hypothesis Related to Correlation of GTC, IQ with Social Intelligence of B. Ed. teacher trainees in Pre-Testing

1. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of experimental group in pre testing.

2. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of experimental group in pre testing.

3. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of experimental group in pre testing.

4. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of control group in pre testing.

5. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of control group in pre testing.

6. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of control group in pre testing.

7. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of experimental and control group in pre testing.

8. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of experimental and control group in pre testing.

9. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of experimental and control group in pre testing.

6.1.6. 5 Null Hypothesis Related to Correlation of GTC, IQ with Social Intelligence of B. Ed. teacher trainees in Post-Testing

1. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of experimental group in post testing.

2. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of experimental group in post testing.
3. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of experimental group in post testing.

4. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of control group in post testing.

5. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of control group in post testing.

6. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of control group in post testing.

7. There is no relation between social intelligence and general teaching competency of B. Ed. teacher trainees of experimental and control group in post testing.

8. There is no relation between intelligent quotient and general teaching competency of B. Ed. teacher trainees of experimental and control group in post testing.

9. There is no relation between intelligent quotient and social intelligence of B. Ed. teacher trainees of experimental and control group in post testing.

6.1.6.6 Null Hypothesis Related to Pre-Test of Social Intelligence of IXth Standard Pupils

1. There is no significant difference between pre-test score of social intelligence of experimental and control group of IXth standard pupils.

2. There is no significant difference between pre-test score of patience as a component of social intelligence of experimental and control group of IXth standard pupils.

3. There is no significant difference between pre-test score of cooperativeness as a component of social intelligence of experimental and control group of IXth standard pupils.

4. There is no significant difference between pre-test score of confidence level as a component of social intelligence of experimental and control group of IXth standard pupils.

5. There is no significant difference between pre-test score of sensitivity as a component of social intelligence of experimental and control group of IXth standard pupils.
6. There is no significant difference between pre-test score of recognition of social environment as a component of social intelligence of experimental and control group of IXth standard pupils.

7. There is no significant difference between pre-test score of tactfulness as a component of social intelligence of experimental and control group of IXth standard pupils.

8. There is no significant difference between pre-test score of sense of humour as a component of social intelligence of experimental and control group of IXth standard pupils.

9. There is no significant difference between pre-test score of memory as a component of social intelligence of experimental and control group of IXth standard pupils.

6.1.6.7 Null Hypothesis Related to Post-Test of Social Intelligence of IXth Standard Pupils

1. There is no significant difference between post-test score of social intelligence of experimental and control group of IXth standard pupils.

2. There is no significant difference between post-test score of patience as a component of social intelligence of experimental and control group of IXth standard pupils.

3. There is no significant difference between post-test score of cooperativeness as a component of social intelligence of experimental and control group of IXth standard pupils.

4. There is no significant difference between post-test score of confidence level as a component of social intelligence of experimental and control group of IXth standard pupils.

5. There is no significant difference between post-test score of sensitivity as a component of social intelligence of experimental and control group of IXth standard pupils.

6. There is no significant difference between post-test score of recognition of social environment as a component of social intelligence of experimental and control group of IXth standard pupils.

7. There is no significant difference between post-test score of tactfulness as a component of social intelligence
of experimental and control group of IXth standard pupils.

8. There is no significant difference between post-test score of sense of humour as a component of social intelligence of experimental and control group of IXth standard pupils.

9. There is no significant difference between post-test score of memory as a component of social intelligence of experimental and control group of IXth standard pupils.

6.1.6.8 Null Hypothesis Related to Pre-test of Scholastic Achievement of IXth Standard Pupils

1. There is no significant difference between experimental and control group in pre-test score of achievement test of Marathi subject for IXth standard pupils.

2. There is no significant difference between experimental and control group in pre-test score of achievement test of Science subject for IXth standard pupils.

3. There is no significant difference between experimental and control group in pre-test score of achievement test of History subject for IXth standard pupils.

4. There is no significant difference between experimental and control group in pre-test score of achievement test of Scholastic achievement of IXth standard pupils.

6.1.6.9 Null Hypothesis Related to Post-test of Social Intelligence of IXth Standard Pupils

1. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of social intelligence.

2. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of patience.

3. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of cooperativeness.

4. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of confidence level.

5. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of sensitivity.
6. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of recognition of social environment.

7. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of tactfulness.

8. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of sense of humour.

9. There is no significant difference between post and pre testing of control group of IXth standard pupils with respect to score of memory.

6.1.6 Null Hypothesis Related to Post Test–Pre Test of Social Intelligence of IXth Standard Pupils

1. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of social intelligence.

2. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of patience.

3. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of cooperativeness.

4. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of confidence level.

5. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of sensitivity.

6. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of recognition of social environment.

7. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of tactfulness.

8. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of sense of humour.

9. There is no significant difference between post and pre testing of experimental group of IXth standard pupils with respect to score of memory.
6.1.6.11 Null Hypothesis Related to Post-test of Scholastic Achievement of IXth Standard Pupils

1. There is no significant difference between experimental and control group in post-test score of achievement test of Marathi subject for IX standard pupils.

2. There is no significant difference between experimental and control group in post-test score of achievement test of Science subject for IX standard pupils.

3. There is no significant difference between experimental and control group in post-test score of achievement test of History subject for IX standard pupils.

4. There is no significant difference between experimental and control group in post-test score of achievement test of Scholastic subject for IX standard pupils.

6.1.6.12 Null Hypotheses Related to Correlation between Social Intelligence and Scholastic Achievement of IXth Standard Pupils

1. There is no relation between Social Intelligence and Scholastic Achievement of Experimental Group of IXth Standard Pupils in Pre Testing.

2. There is no relation between Social Intelligence and Scholastic Achievement of Control Group of IXth Standard Pupils in Pre Testing.

3. There is no relation between Social Intelligence and Scholastic Achievement of Experimental and Control Group of IXth Standard Pupils in Pre Testing.

4. There is no relation between Social Intelligence and Scholastic Achievement of Experimental Group of IXth Standard Pupils in Post Testing.

5. There is no relation between Social Intelligence and Scholastic Achievement of Control Group of IXth Standard Pupils in Post Testing.

6. There is no relation between Social Intelligence and Scholastic Achievement of Experimental and Control Group of IXth Standard Pupils in Post Testing.

The research hypotheses related null hypotheses are placed for testing by using appropriate techniques. They are mentioned in Chapter – V (Data Analysis, Interpretations and Results).
6.1.7 Limitations, Delimitation and Scope

6.1.7.1 Limitations

1. The study restricted with following components of social intelligence.
   i) Patience
   ii) Cooperativeness
   iii) Confidence Level
   iv) Sensitivity
   v) Recognition of Social Environment
   vi) Tactfulness
   vii) Sense of Humour
   viii) Memory

2. The textbooks of following subjects are considered for preparation of pedagogical content knowledge package.
   a) From Language Group - Marathi
   b) From Science Group - Science-II
   c) From Social Science Group - History

6.1.7.2 Delimitations

1. The study is limited to one B. Ed. colleges which is from Satara district, affiliated to Shivaji University Kolhapur.
2. The study is limited to those B. Ed. teacher trainees admitted in academic year 2009-10
3. The study is limited to one Marathi Medium High School which is from Karad City in Satara district
4. The study is limited to those High School pupils admitted in academic year 2009-10

6.1.7.3 Scope

1. The same conclusions of this research can be extended to Marathi medium B. Ed. colleges.
2. The same conclusions of this research can be extended to all schools of Marathi medium using textbooks employed by S. S. C. and H. S. C. Board, Pune.
3. This research will be extended to those B. Ed. colleges which following the similar teacher education programme.
4. This study will be helpful for teacher educator to guide to teacher trainee for The enhancement of social intelligence among the secondary school students.
5. The conclusions of the study will be useful for teacher educators & teacher trainees of Marathi, Sciences and History teaching methodologies.

6. This pedagogical content knowledge package will make provision of guidelines for preparing same packages of another subject.

### 6.1.8 Methodology of Research

#### 6.1.8.1 Method

Experimental method was used in this study. In this experimental method pre test – post test equivalent group design.

#### 6.1.8.2 Sampling

In all one college has been selected among five colleges in Karad taluka (Dist. Satara). From one B. Ed. college 60 teacher trainees was selected randomly including 20 teacher trainees for each school subject – Marathi, Science and History using lottery method.

Researcher has selected two divisions of IXth standard from same school randomly, 45 pupil of each division considered as statistic sample for the study.

#### 6.1.8.3 Tools of Data Collection

For the purpose of data collection following standardized tests was used.

1. General Teaching Competency (GTC) – B. K. Passi
2. Non Verbal Intelligence Test – G. H. Nafde
4. Scholastic Achievement Test of Marathi, Science and History Subject – prepared by Researcher

#### 6.1.8.4 Statistical Techniques

For the present study 't' test and correlation 'r' was employed for data analysis.

### 6.1.9 Procedure of Research

Research procedure involves 3 major phases which are shown follows:

#### 6.1.9.1 Phase – I: Testing and Analysis

Phase- I involves administration of Social Intelligence Test, Non Verbal Intelligence Test and General Teaching Competency Scale for selection of teacher trainees also social intelligence test on IX standard pupils.

This phase also involves textbook analysis of Marathi, Science and History related to component of social intelligence.
6.1.9.2 Phase – II : Preparation of Pedagogical Content Knowledge Package and Training Programme for Teacher Trainees

This phase involves preparation of pedagogical content knowledge package of Marathi, History and Science-II subjects and also involves training of teacher trainees using the package of pedagogical content knowledge package.

6.1.9.3 Phase – III : Implementation and Assessment of Pedagogical Content Knowledge Package on IXth standard pupils

The assessment was done on 1) Social Intelligence, 2) Scholastic Achievement.

6.2 Conclusions (In relation with Objectives of the study):

Objective No. 1 and 2 are procedural objectives hence objective wise conclusions of Objective No. 3, 4 and 5 are given here.

Objectives No. 3:

To find out the effectiveness of developed pedagogical content knowledge package for enhancing of social intelligence among IXth standard pupils

Conclusions:

1. Social intelligence based pedagogical content knowledge package significantly enhance patience, cooperativeness, confidence level, sensitivity, tactfulness, sense of humour and memory as a component of social intelligence among B. Ed. teacher trainees.

2. Social intelligence based pedagogical content knowledge package not significantly enhanced recognition of social environment as a component of social intelligence among B. Ed. teacher trainees.

3. Social intelligence based pedagogical content knowledge package significantly enhance social intelligence among B. Ed. teacher trainees.

4. Social intelligence based pedagogical content knowledge package significantly more enhanced patience and less enhance recognition of Social environment as compare to other component of social intelligence among B. Ed. teacher trainees.

5. Social intelligence based pedagogical content knowledge package significantly enhance patience, cooperativeness, confidence level, sensitivity, recognition of social environment, tactfulness, sense of humour and memory as a component of social intelligence among IXth standard pupils.
6. Social intelligence based pedagogical content knowledge package significantly enhanced social intelligence among IX std. pupils.

7. Social intelligence based pedagogical content knowledge package significantly more enhanced patience and less enhance recognition of Social environment as compare to other component of social intelligence among IX std. pupils.

8. The traditional training provided to teacher trainees is also effective for enhancing memory as a component of social intelligence among IXth standard pupils.

Objectives No. 4:

To find out the effectiveness of developed pedagogical content knowledge package on the scholastic achievement of IX std. pupils related to content of Marathi, Science and History subjects

Conclusions:

1. Social intelligence based pedagogical content knowledge package significantly enhanced achievement of Marathi subject among IX std. pupils.

2. Social intelligence based pedagogical content knowledge package significantly enhanced achievement of Science subject among IX std. pupils.

3. Social intelligence based pedagogical content knowledge package significantly enhanced achievement of History subject among IX std. pupils.

4. Social intelligence based pedagogical content knowledge package significantly enhanced achievement of scholastic achievement subject among IX std. pupils.

Objectives No. 5:

To find out the correlation between social intelligence and scholastic achievement of IX std. pupils.

Conclusions:

1. There is low positive correlation between scholastic achievement and social intelligence.

2. Considering component wise correlation of social intelligence with scholastic achievement it varies to low positive for patience, cooperativeness, confidence level, sensitivity and tactfulness and varies to negligible positive for recognition of social environment and sense of humour and also varies to negligible negative for memory.
6.3 Discussion of the Conclusions

The discussion is held with the purpose of comprehension of conclusions of present study in the context of objectives, assumptions, limitations, scope and previous studies and literature.

The coefficient of correlation for scholastic achievement and social intelligence is found low positive and componentwise observation of correlation shown that the patience, cooperativeness, confidence level, tactfulness is low positive and for recognition to social environment and sense of humour it was negligible positive and is negligible negative for memory.

The above result at first, for enhancement of social intelligence high scholastic achievement is not a prerequisite. It can be enhanced among the students sprayed in all categories of scholastic achievement.

Second, additional efforts taken by teachers for enhancement of social intelligence doesn’t affect the scholastic achievement negatively. Infact, the efforts are found optimal to increase the score of scholastic achievement.

Subjectwise analysis of score of scholastic achievement between control and experimental group has shown that the scholastic achievement is significantly increased for all three subjects Marathi, Science and History.

Now, considering the results of hypotheses testing \( H_{23} \) to \( H_{27} \) with above discussed correlation, it is clarified that social intelligence based pedagogical knowledge package is effective for scholastic achievement.

As mentioned in Chapter – II, it is found that the most studies are correlational. For example, Ray, D. K. (1973), Bali, S. S. (1981), Zamen (1982) and Basavanna (1971) correlated social intelligence to values, personality attributes, creativity, emotional sensitivity respectively. All the correlations are positive. The positive correlations obtained in present study support the conclusions of previous study.

The increase in scholastic achievement as observed in hypotheses testing \( H_{23} \) to \( H_{27} \) also reflect that the social intelligence can be enhanced through school subjects Marathi, Science and History. But they are selected here for representation of Languages, Sciences and Social Sciences. Therefore, the conclusion can be generalised to Languages, Sciences and Social Sciences.

Sankpal, R. U. (2008) and Patil, S. K. (2006) have developed packages for interpersonal skills and social skills respectively. The components of interpersonal and social skills are similar to social intelligence and the packages are found effective through experimental study. They had concluded that the packages are effective to develop emotional intelligence, interpersonal and social skills among the trainees. But these packages had not correlated their outcomes...
to academic record of related target group. Present study had covered that aspect and had shown the effectiveness of social intelligence based pedagogical content knowledge on both dimensions, one on social intelligence and second on scholastic achievement.

Pal, A. (1988), Jaluria, Dembla (1990), Chhotray, M. (1991) has studied on variables cooperation and competition, personality and humour respectively. These studies are also correlational study and interrelations are verified. They have established positive correlation. Present study supports to them.


The above said packages are purely subject oriented, they are not useful for inclusive goals of education. Present study put a common package dealing with subject knowledge as well as attributes beyond subject knowledge that is functional for all types of teachers and students.

Following recommendations and topics for further study based on above discussion are proposed.

6.4 Recommendations

Recommendations based on discussion of conclusion are made for teacher training colleges, teacher educator and teacher trainee as follows:

6.4.1 Training Colleges

1. Training colleges should attract the schools through innovative practices for development of social intelligence, so that the schools will be willing to make available them to training colleges.

2. As planning is important task related to teaching performance, the teacher training colleges should organise lesson planning workshop aimed at integration of social intelligence.

3. Subjectwise workshop on each component of social intelligence and its integration during actual classroom should be conducted for in-service teachers.

4. The detailed pedagogical content knowledge package should be prepared for each subject will be beneficial to all components of school and teachers of respective subject.

5. Feedback of pre-service student teachers should be taken about the implementation of pedagogical content knowledge package during actual classroom.
6.4.2 Teacher Educators

1. For the identification of content, analysis of content and enrichment of content related to social intelligence the teacher educator should give proper training to teacher trainees for the enhancement of social intelligence among pupils.

2. Feedback related to lesson planning workshop; teacher educator should provide plan evaluation scale to the teacher trainees and motivate self evaluation and revision of the lesson plan related to integration of social intelligence.

3. The teacher educators should be resourceful, enthusiastic and conduct some experiments in their regular training programme in the area such as application of pedagogical content knowledge during classroom teaching, identification and use of proper knowledge representation, enrichment of content related to social intelligence.

6.4.3 Teacher Trainees

1. Teacher trainee should analyze the content of textbook with respect to social intelligence for enhancing social intelligence among pupils.

2. Teacher trainee should teach by enrichment of analyzed content of social intelligence.

3. Teacher trainees should select proper and relevant knowledge representations during teaching of content related to social intelligence.

4. Teacher trainee should apply pedagogical content knowledge in classroom teaching related to components of social intelligence without isolating content knowledge and general pedagogical knowledge separately.

6.5 Topics for Further Study

Each research has potential to extend upto very high but due to limits of resources, subject matter and methodology one has two delimit it. But each study in its context provides a platform to proceed forward in many directions. Therefore, it has value to direct by putting issues emerged through its own process. Present study proposes following topics for further study.

1. The study could be replicated giving special trace on each component of social intelligence.
2. This study can be conducted to aided, unaided Colleges of Education in rural and urban areas and replicated to higher secondary and college level as per requirement of the content.

3. Replace studies with larger sample, different designs are recommended in order to support and strengthen the findings of the study.

4. The effectiveness of pedagogical content knowledge package in terms of pupils enhancement of IX standard pupils was studied. The study can be replicated for different grade levels to test the general ability of its conclusion.

5. The study was conducted in one of the non-aided College of Education affiliated to Shivaji University, especially in urban area. Its applicability and general ability is limited to representativeness of the population. The study can be conducted in Colleges of Education in rural area and the College of Educations affiliated to other universities also.

6. The experiment was conducted on the teacher trainees and pupils who adopted Marathi medium. It can be reproduced in different medium Colleges of Education and schools.

7. Research may be conducted to test the feasibility of other models of package development.

8. The presage variables like social intelligence, scholastic achievement were taken into account. The other presage variables such as sex, geographical area, socio-economic status etc. can be studied.

9. This study can be applicable to other methods like Hindi, English, Mathematics and Civics etc.

10. Pedagogical content knowledge package be developed for multiple intelligence, emotional intelligence and life skills.

11. Standard scale can be developed for measurement of social intelligence.

12. Self instructional pedagogical content knowledge package be developed for teacher trainees.

13. Research may be conducted for in-service teacher trainee.

14. In-service training programme for enhancement of social intelligence among secondary school pupils can be developed.
Educational researches dedicated to reconstruction of educational practices for making concern of individual development to welfare of society is need of contemporary context, enhancement, social intelligence through curriculum and teaching methodology among the individuals during the age of personality building may cause such reconstruction.

Enhancement of social intelligence is not exclusive training rather it can be fostered through regular classroom teaching by the teachers who are aware and skilled to integrate it with pedagogical content knowledge.

Present study was exercise to prepare social intelligence based pedagogical content knowledge package development for training of teacher trainees and to evaluate its effectiveness by experimental on secondary school pupils.

As a result of study, social intelligence based pedagogical content knowledge package has succeed to enhance social intelligence among secondary school pupils and also explored positive correlation between scholastic achievement and social intelligence. In short, social intelligence can be enhanced parallely with scholastic activities through inclusive pedagogical practices by teachers.