CHAPTER - II

2.0.0 REVIEW OF RELATED LITERATURE:

The review and the thorough study of the related literature lead the researcher to the new peaks of informations and knowledge. Here he gets the opportunity to evaluate the results or findings of the researches done in his own area of research. Through this review he enables himself to know about the gaps in knowledge, contradictions in knowledge and need of the repetition of the researches. During review of the related literature the researcher reads between the line about various research methods, sampling methods, treatment of raw data etc. which makes him more and more informed about the rationale of various methodologies to which he is going to use in his own research. Taking under his consideration the merits and demerits of the various researches and of the researchers the chances of happening of the similar mistakes in his own research work minimizes surely.
Actually no fact is meaningful without being related to some other facts, rationally. The review of related literature is close with the intention to find out the related facts been discovered in the similar field of research that they can be related with each other whosessoever the rationale of the relationship is clear. According to Good Barr and Scates (1941) as it is essential for a good doctor to be familiar with the latest medical researches done in his (of specialization) area, similarly for a good student, for the researcher working in the field of research, it is essential to be familiar with all the informations and researches being done in education.

It is the matter of fact that review of related literature works like the stick of the blind man unless and until the researcher can not lead to the needed direction. Really without having a proper knowledge of work done in some field of research, without having the knowledge of the methodologies and findings of the researches done in the field, a researcher can neither scientifically decide his research problem nor can make a synopsis for the research.
There exists a continuum between the old theories and new ones. Knowledge is dynamic and it always grows along this continuum. The past is to be discussed to view a problem in a proper perspective so that a researcher may streamline his efforts to solve the problem. Keeping in view the objective of the present study numerous studies pertaining to effectiveness of Jurisprudential Inquiry model of teaching have been studied.

2.1.0 Studies Related to Effectiveness of Jurisprudential Inquiry Model of teaching (JIM):

STUDY: 1

This study was conducted by Tiwari, K.K. (1986). The problem of the study was worded as "Effect of Jurisprudential Inquiry Model on shift in value preferences in terms of right to equality and freedom upon VII Grade Students."

Objectives:

1. To see the effect of JIM on stance change upon VII grade students.
2. To see the effect of JIM on shift in sociometric choices of the VII, grade students in relation to item one (School problem).

3. To see the effect of JIM on shift in sociocentric choices of the VII, Grade students in relation to item two (Caste problem).

4. To see the effect of JIM on shift in value preference in terms of right to equality upon VII grade students.

5. To see the effect of JIM on shift in value preference in terms of right to freedom upon VII grade students.

**Sample:**

The sample of present study was consisted of all the 140 VII grade students of a school of Indor city the study was based on the pre-test post-test single group design.

**Tools:**

The following tools, prepared by the investigator himself, were used:
1. Opinionnaire on Right to Equality.

2. Opinionnaire on Right to freedom.

3. Sociometric Test.

**Statistical Techniques Used:**

To analyses the date the statistical techniques used chi-square, correlation and ‘t’ test.

**Conclusion:**

The following conclusions were drawn on the basis of the results of the present study:

1. JIM produced significant effect upon stance change among VII grade students.

2. JIM had significant effect upon the sociometric choices of the VII grade students in relation to item two.
3. JIM had significant effect upon the sociometric choices of the VII grade students in relation to item two.

4. On items six, eight and ten JIM had significant effect on shift in value preferences in terms of right to equality upon VII grade students. But at the same time on items seven and nine JIM had no significant effect on shift in value preferences in terms of right to quality upon VII grade students.

5. For items seven, nine and ten JIM had significant effect on shift in value preferences in terms of right to freedom upon VII grade students. But at the same time on item six and eight JIM had no significant effect on shift in value preferences in terms of right to freedom upon VII grade students.

**STUDY - 2**

Agrawal, R. (1987) conducted a study to know the effect of JIM on development of values. This study was conducted on post graduate students. Pre-test, post-test single group design was used. The sample
consisted of twelve students of M.A. (Previous) class, Allport, Version, Lindzery test of value preference and Mishra's value preference tools were used to know the value preferences of students. The group was exposed to fifteen JIT Session. 't' test was applied between scores of per-test and post-test of the group. It was concluded that JIM is effective for developing the social value and fraternity value. JIM was not found to contribute significantly to the development of value namely; theoretical, economic, aesthetic, political, religious, faith in human dignity, freedom to express, freedom to work, self control, peace, secularism, tolerance, pride in Indian heritage, equality, unity, mutual co-operation impartiality, obedience, social welfare, justice and kindness.

**STUDY -3**

Hasan, S. (1987) conducted a study to find out the effect of intelligence and Jurisprudential Inquiry Model Teaching on the development of social competence. The main objective of the study was to study the effect of JIM, intelligence and their interaction on development of social competence of girls. Sample of this experiment
consisted of 60 girls of XI class of Allahabad city. Pre-test, Post-test control group design was used. Subjects were exposed to 12 JIT session and their gain scores for social competence were taken as an indeed of change in social competence. Data was analyzed by using 3x2 factorial design of ANOVA, taking three level of intelligence and two level of treatment. She found that intelligence had no effect on the development of social competence, but treatment i.e., exposure to 12 JIT sessions showed significant positive effect on development of social competence. Interaction effect was not significant.

STUDY: 4

This study was conducted by pasi, B.K. Sansanwal, D.N. and Singh, A (1988). The present study was worded as "Models of teaching. Relative Effectiveness of Different training Strategies."

Objectives:

Phase -1
To study the effectiveness of training strategies in terms of understanding reactions and willingness to implement JIM.

**Phase 2:**

To study the relative effectiveness of different strategies in terms of student teacher's understanding of JIM, their competence reaction and willingness temperament the model.

**Phase 3:**

To study the effectiveness of different training strategies for JIM in terms of understanding, competence, reaction and pupil liking.

**Sample:**

Following were the sample of the present study to different Phases:-

Phase: 1  42, teacher educators.

Phase: 2  408 student teachers.

Phase: 3  2700, Pupils.
**Research Design:**

The research designs used at different phases of this study are given below:

**Phase 1:** Single group pre-test, post-test design.

**Phase 2:** Pre-test post-test control group design.

**Phase 3:** Single group post-test design.

**Tools:**

The tools used at different phases of the study are presented below:

**Phase 1:**
- Theory check up.
- Teaching Analysis Guide.
- Reaction Scale.
- Willingness scale (For teacher educators)
- Lesson plan Guide
* Lesson Plan Format

**Phase 2**
* Theory check up.
* Abstract Reasoning Test
* Teaching Analysis Guide
* General Reaction Guide
* Willingness Scale (For Student educators)
* Specific Instructional Effects Assessment
* Lesson plan Guide
* Lesson Plan Format.

**Phase 3**
* Teaching Assessment Guide
* Reaction Scale (For student teachers)
* Reaction scale (For pupils)
* Willingness scale (For student teachers)
Conclusions:

On the basis of the findings at the different phases of the study the following conclusions have been drawn.

Phase: 1

1. The training provided to teacher educators in JIM helped them to understand the theoretical aspect of the model.

2. Teacher educators as a result of training expressed favourable reaction towards JIM.

3. Teacher educators expressed willingness for implementing JIM in their teacher training institution.

Phase 2:
1. The strategy MMT-1 was significantly more effective than other strategies in developing theoretical understanding of the JIM.

2. For developing the competence in JIM the MMT-2 strategy was found significantly more effective than SMT Strategy.

3. All the strategies were found equally effective in developing favourable reactions and willingness to implement this model.

4. The training in JIM was effective in bringing about positive changes in student teachers with regard to specific instructional effects.

This study was conducted by Sarot, K.S. (1988). The problem was worded as "Effectiveness of Jurisprudential Inquiry Model in developing value clarifying competencies of student teachers."

Objectives:

The study was conducted with the following objectives:
1. To study the effectiveness JIM for developing value clarifying competencies of student teacher

2. To study the effect of JIM on meaning and recognition of values by student teachers.

3. To study the effect of JIM on relative priorities given to selected values.

4. To study the effect of JIM on concept clarification of the selected five values.

5. To study the effect of intelligence on development of values.

6. To study effect of socio-economic status on development of values.

Sample:

The sample was consisted of 36 B.Ed., student teacher of the Department of Education, D.A.V.V., Indore. Out of 36 students 18 were
kept in the control group and remaining 18 were kept in the experimental group.

**Research Design:**

The time series parallel group design was used for the study.

**Tools:**

The following tools were used to collect the required data: **Cattles culture Fair Intelligence scale:** In the present study cattles culture Fair Intelligence Scale 3 (Form A) was used to measure the intelligence of the subjects. 'Socio economic status scale (Form-A Urban) developed by Kulshrestha was used. It collects information regarding the following component variables:

* Parental and siblings' occupation.

* Parental siblings' general education.

* Parental and siblings' technical education.
* Economic indicators.

* Cultural indicators.

* Psychological indicators.

The scale of Socio-economic status for urban subjects contains 20 items and is verbal. The test-retest reliability of the scale is 0.08. The scale possesses content validity. The validity of the scale with Kuppuswami and Pandey's questionnaire is 0.57 and 0.89 respectively.

Value clarification Battery: Value clarification Battery is the modified form of 'Value Orientation Battery of Tests'. This battery includes three parts A, B and C. Part A measures value identification reasoning and ranking. Part B measures the semantic meaning of values and Part C measures value judgement.

**Statistical Techniques Used:**
The statistical techniques used in the present study are ‘t’ test, trend analysis, two way analysis of variance with equal cells and analysis of covariance.

**Conclusions:**

1. The experimental group highly benefited from the treatment given for the theoretical aspects of JIM.

2. The five values when taken together for meaning & recognition, interaction between treatment and trial is significant only in cooperation but testing is significant in three values namely dedication to teaching profession, perseverance and scientific outlook.

3. The treatment, testing and interaction of JIM did not influence the pattern of four value namely cooperation, Dedication, Perseverance and scientific outlook.
4. For value clarification the treatment was found to be significantly effective to values-Dedication, Nationalism and Perseverance but is not significant to cooperation and scientific outlook.

5. For the judgement of five values testing and interaction of JIM was effective, but treatment was not effective.

6. The treatment given for value clarification competencies did not produce effect when groups were equated on their intelligence and socio-economic status.

**STUDY: 5**

Dubey, V. (1989) conducted a study to know the effectiveness of Jurisprudential Inquiry Model of teaching on development of social problem solving ability and secular mindedness. She conducted her experiment on 16 M.Ed. students in which 8 students were kept in experimental group and the remaining 8 students in control group. Subjects of both the groups were equated on intelligence (non verbal).
Pre-test post-test control group design was used. Students were exposed to eight Jurisprudential Inquiry teaching sessions. Data was analyzed by using Analysis of Covariance by taking pre-test scores as co-variables. She found that student exposure to Jurisprudential Inquiry teaching sessions develops their social problem solving ability and secularmindedness.

**STUDY: 6**

This study was conducted by Pandey. S.P. (1990). The problem was worded as, "Instructional and Nurturant 'Effects of Jurisprudential Inquiry Models of teaching."

**Objectives:**

Objectives of the study were as follows:

1. To study the effectiveness of JIM for the following:

   (a) Development of social values.
(b) Development of Jurisprudential Inquiry abilities.

(c) Enhancement of sociometric status.

2. To study the effects of socio-economic status and intelligence of students on the effectiveness of JIM.

Sample:

The sample was consisted of XI Class adolescent students of Bharat Scouts and Guides Higher Secondary School situated at Allahabad city. It was randomly selected from the schools principals of which willing to let the experiment be conducted in their schools.

Research Design:

Single group pre-test post test design was used and control group could not be made when the main study was conducted.
Tools:

1. Social value Test developed by the investigator.

2. Jurisprudential Inquiry Ability Instrument developed by the investigator.

3. Sociometric Status Scale developed by the investigator.

4. S.E.S. Scale by Saxena.

Statistical Techniques Used:

The statistical techniques used in the present study were ‘t’, correlation and 3x2 analysis of covariance.

Conclusions:

The main findings of this study are as follows:

1. Jurisprudential Inquiry Model of teaching is effective for development of over all social value as well as six constituent social
values namely justice, liberty, equality, fraternity, secularism and tolerance.

2. Development of 'Equality' and 'Secularism' values is affected by intelligence.

3. Development of Fraternity and 'Tolerance' values is affected by socio-economic status of students.

4. Development of 'Justice' value is affected by interaction between different levels of intelligence and socio-economic status of students.

5. Development of ‘Liberty’ value and the overall social value is not affected by intelligence, socio-economic status or their interaction.

6. Exposure to Jurisprudential Inquiry Model of teaching contributes to the development of all the 14 component Jurisprudential Inquiry abilities as well as overall Jurisprudential Inquiry abilities.
7. Intelligence influence the development of overall Jurisprudential Inquiry (JI) ability as well as 9 component JI abilities i.e., ability to solve definitional problems, ability to identify value conflicts, ability to take a position, ability to justify one's position, ability to assume arguments of others, ability to predict consequences, ability to suggest analogies, ability to assert one value over another value and ability to qualify one's position among students exposed to Jurisprudential Inquiry Model of teaching.

8. Two JI abilities i.e. ability to take a position and ability to justify one's position are significantly affected by variation in socio-economic level.

9. Socio-Economic status and intelligence interact with one another to affect the development of the ability to justify one's position.

STUDY: 7

This study was conducted by Tiwari, K.K. (1992). The problem of the study was worded as "Effectiveness of Jurisprudential inquiry
Model of teaching for developing social competence, civic sense and attitude towards fundamental rights among VII grade students."

Objectives:

1. To study the effectiveness of JIM for:
   
   (a) Developing social competence.
   
   (b) Developing civic sense.
   
   (c) Developing attitude towards fundamental rights.

2. To study the effect of personality factors on development of social competence, civic sense and attitude towards fundamental rights when taught through JIM.

3. To study the effect of academic achievement on development of social competence, civic sense and attitude towards fundamental rights when taught through JIM.
Sample:

The sample was consisted of 60 girl students studying in VIII grade in Government Girls Inter College, Pratapgarh, Uttar Pradesh.

Research Design:

The equivalent group, Pre-test post-test design was employed. The first group (VIII A, N-30) was called as experimental group and second group (VIII B, N-30) worked as control group.

Tools:

1. Social competence scale developed by the investigator.

2. Civic sense Questionnaire developed by the investigator.

3. Fundamental rights attitude scale developed by the investigator.


5. Mishra's personality test.
6. Academic Achievement test.

**Statistical Techniques Used:**

To analyse data statistical techniques namely Mean Median, Chi-square, 'r','t’ standard Deviation and analysis of covariance were used.

**Conclusion:**

The main findings of this study are as follows:

1. The results of the study show that exposure to 30 JIT session does not bring about any significant change in the development of social competence of students.

2. Finding obtained by analysis of covariance indicates that the development of civic sense is not affected by exposure to 30 JIT sessions.

3. Results of this study show that exposure to 30 JIT sessions bring about significant positive change in attitude towards fundamental rights of students.
4. Results obtained by analysis of covariance show that crookedness, self-sufficiency, initiative and work anxiety, traits of personality factor affect significantly development of social competence of students when exposed to 30 JIT session. But at the same time planned working, reticence, egoism, social orientation, emotional disturbance, analytical power, alienation tendency, hesitation, independence, group dependence, perseverance, lethargy dominance, questioning attitude, pessimism, and creative motivation. Adaptability and tolerance traits of personality factors do not affect social competence of students when exposed to 30 JIT sessions.

5. Result obtained by ANCOVA show that crookedness, emotional disturbance, independence, lethargy, dominance, pessimism, work anxiety and reactive motivation traits of personality factor affect significantly the development of civic sense of students when taught through JIM. But planned working self sufficiency, reticence, egoism, social orientation, analytical power, alienation tendency,
hesitation, group dependence questioning attitude, initiative, adaptability and tolerance traits of personality factor do not affect the development of civic sense of students when exposed in 30 JIT session.

6. Result obtained by analysis of covariance suggest that planned working, alienation, tendency, independence, group dependence, dominance, work anxiety traits of personality factor affect significantly the development of students when exposed to 30 JIT session. On the contrary, crookedness, self-sufficiency, reticence, egoism, social orientation, emotional disturbance analytical power, hesitation, perseverance, lethargy, questioning attitude, initiative, pessimism, creative motivation, adaptability and tolerance traits of personality factor affect the development of attitude towards fundamental rights of students when exposed to 30 JIT session.

7. The result obtained through ANCOVA regarding effect of academic achievement on development of social competence of students was found not to by significant.
8. The effect of academic achievement on development of civic sense of students, as indicated by ANCOVA was found to be significant.

9. The result obtained through ANCOVA regarding effect of academic achievement on development of attitude towards fundamental rights of students was found to be significant.

**Study: 8**

This study was conducted by Tiwari, K.K. (1986). The problem of the study was worded as "**Effect of Jurisprudential Inquiry teaching strategy for developing population awareness among IX grade students.**"

**Objectives:**

The present study aimed to achieve the following objectives;

1. To see the effectiveness of Jurisprudential Inquiry Teaching strategy for developing population awareness among IX grade students.
2. To see the effect of personality factors on development of population awareness among IX grade students when taught through Jurisprudential Inquiry teaching strategy.

3. To see the effect of socio-economic status on development of population awareness among IX grade students when taught through Jurisprudential Inquiry Teaching strategy.

**Research Design:**

Single group pre-test post-test design was employed.

**Sample:**

The sample for the present study consisted 30 girl students studying in IX grade in Government Girls Inter College, Ghazipur, Uttar Pradesh.

**Tools:**
1. Population Awareness Scale developed by the investigator.

2. Socio-economic status scale (Urban) by Srivastava G.P.

3. Personality Inventory by Singh and Singh.

Statistical Analysis:

To analyze data statistical techniques, namely ‘t’ test and Chi-square were used.

Conclusion:

1. Exposure to JIT session does not develop population awareness of IX grade students.

2. Extrovert personality factor does not affect the development of population awareness of students when taught through JITS.

3. Introvert personality factors does not affect the development of population awareness of students when taught through JITS.
4. Socio-economic factor does not affect the development of population awareness of students when taught through JITS.

STUDY: 9

BHATTACHARYA, G.C., "effectiveness of Various Models for teaching Geography in Relation to Institutional Resources, Ph.D. Edu., BHU, 1984"

The major objectives of the study were:

1. To find out the effectiveness of teaching geography

2. through the Concept Attainment Model in relation to institutional resources,

3. To find out the effectiveness of teaching geography through the Inductive Model of teaching in relation to institutional resources,

4. To compare the effectiveness of teaching geography through the concept attainment and inductive models of teaching in relation to institutional resources,
5. To find out the interaction effects of the different levels of educational institution resource status, models of teaching and types of concepts taught on the gain in achievement scores of junior high school students in geography.

The study was conducted with parallel group design with three treatments, viz. teaching with traditional method, Concept Attainment Model and Inductive Model. The data were collected with the help of Educational Institution Resource Status Index, Socio-Economic Status Index, Entering Behaviour Test in geography prepared and standardized by the investigator. Other tools used for the data collection were Joshi's General Mental Ability Test and Joshi's Study Habits and Attitude Inventory. Means, t-test, F-test and three way analysis of variance in a 2x2x2 factorial design were used for analyzing data and drawing conclusions.

The major findings of the study were:
1. The Concept Attainment Model group of students did not differ significantly in achievement from the traditional teaching technique group in high resource status educational institution.

2. The students taught through the Concept Attainment Model showed better achievement in geography than the traditional teaching technique group in average and low resource status educational institutions.

3. The Inductive Teaching Model group proved itself to be more effective for achievement in geography in comparison to the traditional teaching technique as well as the Concept Attainment Model, irrespective of the resource status of educational institutions.

**STUDY 10:**

Singh, S.N. 1994. *"Comparison of Inductive Thinking Model with Traditional Method of teaching economics to class XI students in terms of selected cognitive variables."* Ph.D., Education Devi Ahilya Vishwavidyalaya.
The study examines the effectiveness of Inductive Thinking Model (ITM) in comparison to Traditional Method (TM) of teaching economics to Class XI students. It also identifies some other nurturant effects of the model which were not indicated by the Hilda Taba.

Objective:

1. To study the effectiveness of ITM in terms of achievement in economics as well as reactions of students towards ITM,

2. to compare the ITM with TM in terms of achievement in economics inductive reasoning, concept formation, higher mental ability in economics, economic understanding, scientific attitude and creativity separately by considering intelligence as a covariate.

3. to compare the ITM with TM in terms of achievement in economics, inductive reasoning, concept formation, higher mental ability in economics, economic understanding, scientific attitude and
creativity separately by considering academic achievement motivation as a covariate,

4. To study the effect of treatment, intelligence and their interaction on achievements in economics, inductive reasoning, concept formation, higher mental ability in economics, economic understanding, scientific attitude and creativity separately,

5. To study the effect of treatment, sex and their interaction on achievements in economics, inductive reasoning, concept formation, higher mental ability in economics, economic understanding, scientific attitude and creativity separately,

6. to establish regression equation and study the contribution of inductive reasoning, economic understanding, higher mental, ability in economics concept formation, scientific attitude, creativity, intelligence and academic achievement motivation in the prediction of achievement in economics of Class XI students taught through ITM and TM separately, and
7. To study the change in reaction of students towards ITM.

Methodology:

The sample at the first stage comprised 350 Class XI students of three randomly selected intermediate colleges of Uttar Pradesh. Out of 350, there were 104 science and 246 arts students. The sex composition in the sample was 292 males and 58 females. At the second stage the sample consisted of 122 Class XI students of two randomly selected intermediate college of U.P. of these, 75 students (30 males and 45 females) belonged to another inter college. These students learned economics as an optional subject. All these intermediate colleges were affiliated to Board of Secondary Education Allahabad, Uttar Pradesh the medium of Instruction was Hindi. The age of students ranged from 15 to 18 years. Tools used included Verbal Intelligence Text developed by Ojha and Chaudhry, Sharma's Academic Achievement Motivation Test, Concept Formation Text developed by Dwivedi, Science Attitude Scale developed by Sansanwal and Sathe and Passi Tests of Creativity. Apart from these, higher mental ability in economics, inductive reasoning,
economic understanding, reaction towards inductive thinking model and achievement in economics were assessed with the help of tools developed by the investigator. The statistical techniques used for analyzing the data were mean, SD, coefficient of variance, Chi-square, ANCOVA, Multiple Regression Analysis and Correlated-test.

**Major Finding:**

1. Inductive thinking Model was found to be more effective compared to traditional method in terms of Achievement in economics and Reaction towards Inductive Thinking Model.

2. The mean Higher Mental Ability in Economics gain scores of ITM and T.M. Group did not differ significantly.

3. The intelligence was found to influence significantly the student's achievement in economics, inductive reasoning, concept formation, higher mental ability in economics, economic understanding and scientific attitude, but not the creativity of students.
4. The interaction between treatment and intelligence significantly influenced the achievement in economics. Inductive thinking model was found to be suitable for high intelligent students although low intelligent students could also be benefited.

5. The interaction between treatment and intelligence did not influence significantly the inductive reasoning, concept formation, higher mental ability in economics of students.

6. Sex did not influence significantly the student's achievement in economics, inductive reasoning, and concept formation, higher mental ability in economics, economic understanding, scientific attitude and creativity.

7. The interaction between treatment and sex was found to influence significantly the achievement in economics of students. ITM was found to be suitable for both the male and female students in teaching economics in comparison to traditional method.
8. The interaction between treatment and sex did not influence significantly the inductive reasoning, concept formation, understanding, scientific attitude and creativity of students.

9. The achievement in economics of students taught through inductive thinking Model was found to be predicted through intelligence only, but higher mental ability in economics and scientific attitude may also be considered.

10. The achievement in economics of students taught through Traditional Method was found to be predicted through intelligence, higher mental ability in economics and inductive reasoning.

11. ITM was able to bring significant favourable change in the reaction of students towards this model.

STUDY: 11

GUPTA, NARESH KUMAR, 1995. A Study of relative effectiveness of some information processing models of teaching on

Problems:

1. To design and develop instructional plans for teaching selected units in science from amongst the prescribed course of study at Class IX stage,

2. to study individual effectiveness teaching through concept Attainment Model, Inductive Thinking Model as well as Inquiry Training Model and

3. To find the relative effectiveness of teaching through Concept Attainment Model, Inductive Thinking Model and Inquiry Training Model.

Methodology:

A purposive sample of 140 students in the form of three non-equivalent intact section of Class IX in the same government senior
secondary school of Delhi, drawn with the help of incidental sampling technique was used. Tools used to collect data included the group General Mental Ability Test by S. Jalota, Reasoning Ability Test (RAT) by K. Bayati, Verbal Test of Scientific Creativity by V.S. Sharma and J.P. Shukla, Part test of Passi Test of Creativity (Verbal and non verbal) and science Attitude Scale by Avinash Grewal. Quasi-experimental method was employed for the study in a natural setting with pre-test and post-test parallel group design.

**Major Findings:**

1. Concept attainment model of teaching was found effective in developing reasoning ability, scientific creativity as well as fostering favourable attitude of the students towards science where as it could not foster inquisitiveness, persistency of problem awareness among them.

2. Inductive thinking model was found to promote reasoning ability, scientific creativity, problem awareness ability as well as attitude of
the students towards science favourable but could not bring significant enhancement in inquisitiveness or persistency ability among them.

3. Inquiry training model of teaching was found effective in developing reasoning ability, scientific creativity, problem awareness ability and attitude of the students towards science favourable. However, this model could not bring significant gain in inquisitiveness of persistency.

4. Concept attainment model, inductive thinking model and inquiry training model did not differ in effectiveness in terms of enhancing reasoning ability or scientific creativity.

5. Inductive thinking model and inquiry training model of teaching had been rated better than concept attainment model in fostering problem awareness ability or scientific creativity.
6. Concept attainment model, inductive thinking model or inquiry training model did not differ in promoting of the students towards science.

STUDY: 12

Tiwari, K. K. (2001-02) an effort has been made to see the effect of Jurisprudential Inquiry Model of teaching for developing sex awareness among school adolescents.

At present, when the whole society undergoes cultural and social changes, and faces a mammoth problem of AIDS explosion, a new teaching strategy is needed in helping people rethink their positions on sexual matters, so that as future citizens they may conduct themselves rationally and may also form correct attitudes regarding it. In the present study by Tiwari, K.K. (2001-02) an effort has been made to see the effect of jurisprudential inquiry model of teaching for developing sex awareness among school adolescents.

Objectives of the Study:
The present study aims at achieving the following objectives:

1. To see the effectiveness of jurisprudential inquiry model of teaching for developing sex awareness among XI grade School adolescents.

2. To see the effect of personality factors on the development of sex awareness among XI grade School adolescents when treated through jurisprudential inquiry model of teaching.

3. To see effect of Socio-economic status (SES) on development of sex awareness among XI grade school adolescents when treated through jurisprudential inquiry model of teaching.

Subsidiary Objective:

The investigator has constructed and standardized the Sex Awareness Scale (SAS) to measure the attitude of school adolescents towards sex.

Hypothesis:

1. Jurisprudential Inquiry Model contributes to development of sex awareness among XI grade school adolescents.
2. There is no significant effect of personality factors on the development of sex awareness of XI grade School adolescents when treated through jurisprudential inquiry model of teaching.

3. There is no significant effect of Socio-economic status (SES) on development of sex awareness among XI grade school adolescents when treated through jurisprudential inquiry model of teaching.

**Design of the study:**

The objective of the present investigation was to study the effectiveness of jurisprudential inquiry model of teaching for developing sex awareness among XI grade school adolescents. For this purpose single group pre-test, post-test design was employed. The group was given pre-test of three tools viz, Sex Awareness Scale (by Tiwari, K.K.), Introversion-Extroversion Inventory (by Aziz, P.F.) and Socio-economic Status Scale (by Srivastava, G.P.).

Personality inventory and SES scale were administered to the group to know the intervening effect of personality and Socio-economic status
upon dependent variable-sex awareness when treated through Jurisprudential Inquiry Model of teaching. 20 lessons prepared on the basis of JIM were taught to the group. After 20 lessons treatment the group was given post-test of sex-awareness scale. Chi-square test, t-test 'r' were used to analyze the data.

**Population and Sample:**

Students of XI grade living at the District headquarter at Ghazipur City constituted the population of this study. Sample for the study consisted of 30 girl students studying in XI grade (session 2001-2002) in Ghazipur Girls Inter College, Mianpura, Ghazipur, U.P..

**Tools:**

Following tools were used for the various purposes of the study:

1. Sex Awareness Scale (Self made).

2. Introversion-Extroversion by Aziz, P.F.

3. SESS (Urban) by Srivastava, G.P.
Procedure for Data Collection:

First of all, the group was administered three tests - sex awareness scale, introversion-extroversion inventory and socio-economic status scale-as a pre-test. Then 20 lesson treatments were given to the group (XI). One lesson one day. After the 20 lesson treatment, the group was again administered sex awareness scale as a post-test. All the test items were also collected like pre-test items.

Statistical Analysis:

To analyze data ‘t’ test was used.

2.2.0 Discussions

Hypothesis 1- Effect of Jurisprudential Inquiry Model of Teaching on Development of Sex Awareness:
To test hypothesis 1, twenty lessons prepared on the basis of JIM were taught to the sample (N=30) students, one lesson each day was taught to the students. The pre-test scores on sex awareness scale were treated as Co-Variables and post test scores as dependent variables. Obtained 't' value for the treatment effect of jurisprudential inquiry teaching (JIT) sessions on the development of sex awareness of XI grade students is 2.26 which is significant at 0.05 level of significance, because it is more than the required critical value (1.70, for df 29). It shows that exposure to JIT sessions contributes to the development of sex awareness among XI grade school adolescents.

**Hypothesis 2- Effect of Extrovert Personality factors on Development of Sex Awareness:**

To test the hypothesis 2, the pre-test, post-test scores of extrovert personality students on sex awareness scale were taken as co-variables and dependent variables respectively. Obtained ‘t’ value for treatment effect of extrovert personality factors on sex awareness of XI grade school adolescents taught through JIM is 1.46. This value is not significant at
0.05 level of significance because it is less then the required critical value (1.80, for df 11). It shows that extrovert personality factors do not affect the development of sex awareness of XI grade school adolescents when taught through JIM.

Hypothesis 3 - Effect of introvert personality factors on development of sex awareness:

To test the hypothesis 3, the pre-test, post-test scores of introvert personality students on sex awareness scale were taken as co-variables and dependent variables respectively. Calculated ‘t' value for treatment effect of extrovert personality factors on sex awareness of XI grade school adolescents taught through JIM is 0.79. This value is not significant at 0.05 level of significance because it is less than the required critical value (1.80, for df 10). It shows that introvert personality factors do not affect
the development of sex awareness of XI grade school adolescents when taught through JIM.

**Hypothesis 4 - Effect of Ambivert personality factors on development of sex awareness:**

To test the hypothesis 4, the pre-test, post-test scores of ambivert personality students on sex awareness scale were taken as co-variables and dependent variables respectively. Obtained ‘t' value for treatment effect of extrovert personality factors on sex awareness of XI grade school adolescents taught through JIM is 3.06. This value is not significant at 0.05 level of significance because it is less than the required critical value (1.94, for df 6). It shows that ambivert personality factors do not affect the development of sex awareness of XI grade school adolescents when taught through JIM.
Hypothesis 5 - Effect of High Socio-Economic Status on Development of Sex Awareness:

To test the hypothesis 5, the pre-test, post-test scores of high socio-economic status students on sex awareness scale were taken as co-variables and dependent variables respectively. Obtained ‘t' value for treatment effect of extrovert personality factors on sex awareness of XI grade school adolescents taught through JIM is 0.26. This value is not significant at 0.05 level of significance because it is less then the required critical value (1.28, for df 12). It shows that high socio-economic status does not affect the development of sex awareness of XI grade school adolescents when taught through JIM.

Hypothesis 6 - Effect of Low Socio-Economic Status on Development of Sex Awareness:
To test the hypothesis 6, the pre-test, post-test scores of Low socio-economic status adolescents on sex awareness scale were taken as co-variables and dependent variables respectively. Obtained ‘t' value for treatment effect of extrovert personality factors on sex awareness of XI grade school adolescents taught through JIM is 3.30. This value is not significant at 0.05 level of significance because it is less then the required critical value (1.78, for df 12). It shows that Low socio-economic status does not affect the development of sex awareness of XI grade school adolescents when taught through JIM.

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