

## DETAILS OF THE RESEARCH PROJECTS UNDERTAKEN

### 1. Major Research Project (Dr. T.C. Thankachan ) 2009 – 2011

Title	“Developing Peace Values and Peace Skills through Peace Value Model among Teacher Educators and Secondary Level Teacher Trainees – An Experimental Study”
Duration	2 Years (1st May, 2009 to 30th April 2011) and 3 months extension up to 31st July, 2011- letter dtd. 26.03.2011
UGC Approval No. and Date	F.5-13/2006 (HRP) dtd. 26-12-2006
Amount Sanctioned	Rs. 5,01,200/-
Date of Completion	31st July, 2011
Principal Investigator	T. C. Thankachan
Co- investigators	Dr. Anandi Martis & Dr. T. M. Mollykutty

### Major Objectives of the Study

- To identify the core values and skills related to peace.
- To evolve an instructional model called Peace Value Model.
- To prepare and validate training material based on Peace Value Model for developing peace values and peace skills among teacher educators and secondary level teacher trainees.
- To find the effect of the training material on developing peace values and peace skills among teacher educators.
- To find the effect of the training material on developing peace values and peace Skills of the Secondary level teacher trainees
- To compare the peace values and skills among teacher educators and teacher trainees before and after implementing peace value model according to; a) Gender, b) Religion, c) Management and d) Optional Subject.
- To compare the peace values and peace skills of secondary level teacher trainees before and after implementing peace value model according to a) Gender b) Religion and c) Management and d) Optional Subject.

## **Instructional Model Evolved**

**Peace Value Model (PVM);** The peace value model evolved out of the UGC Major Research Project concentrate more on the conflict resolution style for solving the peace dilemmatic situation. There are seven phases in this model. All these seven phases includes different instructional styles and learning activities for conflict resolution. The major steps followed in this model are;

**Presentation** – presenting the peace conflicting situation,

**Identification** – identifying and clarifying the values which conflict in the situation, identifying the alternatives before the central character, listing the positive and negative consequences of the major alternatives, etc.,

**Dialogue** – formation of small groups, discussions within groups, open discussions on values under each consequences, presentation of the views, etc.,

**Creative suggestions** – creative suggestions for problem solving from all groups, listing of the suggestions based on effective problem solving, determining the value criterion to analyse the consequences, etc.,

**Selection** – selection of the best alternative considering the values, consequences, long term effect, etc.,

**Evaluation** – evaluation of the process of conflict resolution, evaluating the best alternative, suggestions from the groups, etc., and

**Conflict resolution** – value based conflict resolution, declaring the values helped in the process of solving the peace conflict and citing related examples.

## **Instructional Materials Developed**

Instructional material to transact the Peace Value Model of Teaching was developed at three stages.

**Stage 1:** Ten transcripts on Peace Value Model were developed by the Project team and teacher educators.

**Stage 2:** Ten transcripts were developed by the Project team and Teacher Educators.

**Stage 3:** Ten worksheets were developed by the Project team and Teacher Educators.

## **Tools Constructed**

One of the objectives of the project was to construct four research tools to measure the Peace Values and Peace Skills. Accordingly, the following research tools were constructed and validated by experts in Value Education.

- Peace Value Identification Inventory
- Peace Value Identification Inventory
- Peace Value Scale (PVS) & Peace Skills Test (PST)

## **Human Resource Developed**

- The work shops on Peace Value Model trained the resource persons including teacher educators and teacher trainees on behalf of the project. As the project team could not find experienced persons, who can handle the Peace Conflict Analysis workshop for Secondary level Teacher trainees, the training programmes were conducted to give training to the Teacher Educators.
- A resource team consisting of 10 Teacher Educators was evolved out of the UGC Major Research Project on Peace. In the second phase 16 teacher educators were trained other than the project team.
- The major outcome of the project was teacher educators and teacher trainees have learned about the Peace Value Model of Teaching for developing Peace Values and Peace Skills.
- M Ed scholars of St. Thomas College of Teacher Education, Teachers of Teacher Training Course of St. Thomas TTI have attended the workshop on Peace Value Model, which helped them to get familiarity with a new strategy for improving the peace value processing skills and also apply it in their daily life.
- The resource persons of different Universities and Colleges whom the principal Investigator, co-investigators and the Project fellow had met for discussion on Peace Value Model have shared their knowledge in the concerned area, and that in turn would help them to enhance their knowledge on Peace Conflict Resolution through developing peace values and peace skills.
- More than One Thousand Secondary level teacher trainees have got the benefit of Peace Value Model of teaching.

## **Other Programmes**

The Principal Investigator and Co-investigators are taking classes through PVM among the Teacher Trainees of St. Thomas College of Teacher Education. Value Oriented Family Life Education to youth and different communities is another area where the Principal Investigator is actively involved in. The project fellow is also taking classes on Value Oriented Family Life and Value based Childcare and Parenting and classes on solving Peace Value Conflicts in different churches. The project fellow is doing her Doctoral Research in the area of Peace Education.

The principal investigator presented a paper in the international conference at University of Malaya, Kaulalumpur, Malaysia with respect to Peace Value Model and Peace Skills.

- The order of peace value preferences of experts are; truth, co-operation, spirituality, love, non-violence, tolerance, forgiveness, honesty, sincerity, justice, kindness, moral stability, truthfulness, adjustment, sympathy, interdependence, discipline, dharma, democracy, social service, patriotism, social conformity and simplicity. From the preferences of the experts the project team selected the most preferred values like; truth, co-operation, spirituality, love, non-violence, and tolerance for further studies and analysis.
- The order of peace skills preferences of experts are;. critical thinking, creative thinking, co-operation, respect, negotiation, active listening, adaptability, self discipline, dialectical thinking, reflection, responsibility, information handling, presentation, and non-verbal communication. From the

preferences of the experts the project team selected the most preferred skills and attitudes for peace conflict resolution like; critical thinking, creative thinking, co-operation, respect, negotiation, and active listening.

- Solving the peace conflicts at the individual level is the most important and the first step to attain peace at the expected level. The model prepared by the project team enables all to analyse the value dilemma or peace conflict and solve the conflicting situation based on the preferred values and value system. Individual conflict resolution is one of the most important strategies to develop peace values, skills, attitudes and consciousness among people. The review of the studies and initiatives shows the urgency of evolving an innovative and specific strategy or model to develop the qualities, values and skills associated with peace. Considering these views the project team evolved the model called Peace Value Model.
- There are seven phases in this model.
- The preparation of the instructional material based on peace value model followed all the steps prescribed in the syntax of the model.
- The teacher educators who preferred truth and love before the implementation of peace value model has changed their preferences more to co-operation, non-violence spirituality and tolerance after the training through peace value model. The values like truth and love has less preferred by the teacher educators after the experiment. Therefore, peace value model is effective in developing and preferring the values which enable people to solve peace conflicting situations. The order of peace value preferences of teacher educators before the training programme based on peace value model was truth, love, spirituality, co-operation, non-violence and tolerance. After the experiment the order of peace value preference has not changed.
- The training programme based on peace value model has significant impact on developing the components of peace skills of teacher educators. Therefore, peace value model is effective in developing peace skills among teacher educators which enable people to solve peace conflicting situations.
- The teacher trainees who preferred co-operation, truth and love before the implementation of peace value model has changed their preferences more to; non-violence, spirituality and tolerance after the training through peace value model. The values like co-operation, truth and love has less preferred by the teacher trainees after the experiment. Therefore, peace value model is effective in developing and preferring the values among teacher trainees which enable to solve peace conflicting situations. The order of value preferences of teacher trainees before the implementation of the instructional material based on peace value model was co-operation, truth, love, tolerance, spirituality and non-violence. But, after the experiment the order of peace value preference of teacher trainees is changed to tolerance, non-violence, spirituality, love, truth and co-operation.
- The peace skills like; critical thinking, creative thinking, co-operation, respect, negotiation, and active listening under the major skills like thinking skills, communication skills and personal skills have significantly improved due to the implementation of the instructional material based on peace value model. The skills with respect to creative and critical thinking are needed for solving the peace conflicts at the individual level. The communication and personal competencies with regard to peace communication, co-operation and respect, peace dialogues, negotiation and listening the issues and causes are prerequisites for the peaceful solution of the conflicting situation. All these skills are developed among the teacher trainees after implementation of the peace value model.
- The teacher educators who preferred truth and love before the implementation of peace value model has changed their preferences more to co-operation, non-violence spirituality and tolerance after the training through peace value model. The values like truth and love has less preferred by the teacher

educators after the experiment. The order of peace value preferences of teacher educators before the training programme based on peace value model was truth, love, spirituality, co-operation, non-violence and tolerance. After the experiment the order of peace value preference has not changed.

- The teacher educators developed their peace skills with respect to thinking skills (critical thinking & creative thinking), personal skills (co-operation & respect), and communication skills (negotiation & active listening).
- The variable 'gender of teacher educators' has not significantly influenced their peace values and peace skills before and after implementing Peace Value Model.
- The variable 'religion of teacher educators' has not significantly influenced their peace values and peace skills except personal skills before adopting PVM. The personal skills are higher among Hindus than the Non-Hindu teacher educators. But this variable has not significantly influenced their peace values and peace skills after implementing Peace Value Model except the value 'love'. The Hindu teacher educators showed more preference on the value 'love' than their Non-Hindu counterparts.
- The variable 'type of management' has not significantly influenced peace values and peace skills of teacher educators of government and private colleges of teacher education before and after implementing Peace Value Model.
- The variable 'optional subject' has not significantly influenced their peace values and peace skills teacher educators before adopting Peace Value Model. This variable has not significantly influenced peace values and peace skills of teacher trainees of science, languages and arts subjects after implementing Peace Value Model except the value 'truth'. The teacher trainees who opted languages preferred the value 'truth' more compared to the teacher trainees of sciences subjects.
- The teacher trainees who preferred co-operation, truth and love before the implementation of peace value model has changed their preferences more to non-violence, spirituality and tolerance after the training through peace value model. The values like co-operation, truth and love has less preferred by the teacher trainees after the experiment. The order of peace value preferences of teacher educators before the training programme based on peace value model was co-operation, truth, love, tolerance, spirituality and non-violence. After the experiment the order of peace value preference has changed to tolerance, non-violence, spirituality, love, truth and co-operation.
- The teacher trainees developed their peace skills with respect to thinking skills (critical thinking & creative thinking), personal skills (co-operation & respect), and communication skills (negotiation & active listening). The means of scores clearly shows the fact that all the peace skills were developed due to the experiment. • The variable 'gender and religion of teacher trainees' has not significantly influenced their peace values and peace skills before and after implementing PVM.
- The variable 'type of management' has not significantly influenced the peace values and peace skills of teacher trainees except the values co-operation and love before adopting Peace Value Model. With respect to the value 'co-operation' the teacher trainees of government teacher education institution showed more preference than the trainees of the private institutions. But, teacher trainees of private institutions showed more preference on the value 'love'. But this variable has not significantly influenced peace values and peace skills of teacher trainees of government and private colleges of teacher education after implementing training through Peace Value Model.
- The variable 'optional subject' has not significantly influenced their peace values and peace skills teacher educators before adopting Peace Value Model. This variable 'has not significantly influenced peace values and peace skills of teacher trainees of science, languages and arts subjects after implementing Peace Value Model except the value 'truth'. The teacher trainees who opted languages preferred the value 'truth' more compared to the teacher trainees of sciences subjects.

## **Contributions**

- This study revealed that the teacher educators and teacher trainees trained through the Peace Value Model of Teaching can transfer the peace values and peace skills to their students. The training on peace value analysis will solve the peace conflicts of all people including the teachers and students.
- A resource team consisting of Teacher Educators was evolved out of the UGC Major Research Project on Peace Education. This team is able to handle classes on Peace Value Model and can help others to improve the Values and Skills at the societal level.
- The main outcome of the workshop was that 48 teacher educators have learned and specially trained on the Peace Value Model of Teaching for developing the values and skills.
- A number of additional human resource have received training on Peace Value Model, which includes teachers of TTI and M. Ed scholars.
- The project team and the teacher educators and trainees trained are giving training on this Model for all other neighboring school teachers in their schools when the heads of schools invited for the same.
- The instructional material (lesson plans, lesson transcripts and the worksheets) evolved out of the workshop is prepared in the form of a book and is used by teacher educators, teachers and trainees for taking classes in different parts of the State.
- The books evolved out of the project can be used for getting a clear awareness on peace education especially Peace Value Model of teaching and practicing peace conflicts analysis in the classroom.
- The instructional style called peace value model for solving the peace related conflicts in life of students, can be infused in the curriculum for solving the conflicts through scientific way.

## **Papers Presented by the Principal Investigator in the Conferences During the Period of the Project**

- The Principal Investigator presented paper on ‘Value Analysis – A Holistic Approach to Value Education for Developing a Culture of Peace and Values among Students’ in the international seminar organized by CTE Kerala at the international seminar conducted by CTE Kerala Chapter on 31st October, 2009.
- The Principal Investigator participated and presented a paper on ‘Peace Value Model – An Innovative Approach to Peace Education’ in the International Seminar on ‘Peace Education: An Orientation for GEN next’ organized by CTE Kerala state centre and St. Thomas College of Teacher Education, Pala on 13th & 14th August, 2010.
- The Principal Investigator participated and presented a paper on ‘A Study on Value Preferences of Adolescents with respect to Peace Conflicting Situations’ along with Ms. Bindumol P. D, in the UGC sponsored National Seminar on ‘Education and Social Sensitivity’ held at St. Thomas College of Teacher Education, Pala, on 25th st & 26th November 2010.
- The Principal Investigator participated and presented a paper on ‘Social Sensitivity: The Result of Values based Conflict Resolution’ in the UGC sponsored National Seminar on ‘Education and Social Sensitivity’ held at St. Thomas College of Teacher Education, Pala, on 25th st & 26th November 2010.
- The Principal Investigator participated and presented a paper on ‘Value Framework: A Pre-requisite for Inclusive Education’ in the National Conference on ‘Inclusive Education: Problems and Prospects’ held at Stella Mary’s College of Education, Sivagiri, Tamilnadu, on 7th st & 8th January 2011.

- The Principal Investigator participated and presented a paper on ‘Developing Peace Skills through Peace Value Model (PVM) – An Experiment among Teacher Educators’ in the International Conference on ‘Innovative Thoughts – Education, Management, Arts, Science, Linguistics’ held at Department of Indian Studies, University of Malays, Kaulalumpur, Malaysia on 12-14 August 2011.

These papers are published in the concerned Seminar Proceedings.

### **Books Published**

1. Peace Education – A Conceptual Framework.
2. Peace Value Model – Theory and Practice.

The project report titled as, “Developing Peace Values and Peace Skills through Peace Value Model among Teacher Educators and Secondary Level Teacher Trainees – An Experimental Study” is published at the completion of the project.

## **2. UGC Major Research Project ( Dr. T.C. Thankachan ) 2007 – 2009**

Title	“Valuing Process of Teachers and Pupils of Secondary Schools of Kottayam District-An Experimental Study”
Duration	2 Years (1st April, 2007 to 31st March 2009)
UGC Approval No. and Date	F.5-13/2006 (HRP) dtd 26-12-2006
Amount Sanctioned	Rs. 3,06,000/-
Date of Completion	31st March 2009
Principal Investigator	T. C. Thankachan
Co- investigators	Dr. Anandi Martis Dr. T. M. Mollykutty

The UGC Major Research Project entitled “Valuing Process of Teachers and Pupils of Secondary Schools of Kottayam District-An Experimental Study” undertaken by Sri. T C Thankachan, was completed. The major findings and achievements of the project are given below.

## **Major Findings of the Study**

The mean scores of different components of value processing skills of secondary school students namely; choosing freely (14.58), choosing from alternatives (14.72), choosing after consideration of consequences (13.43), prizing and cherishing (14.31), publicly affirming when appropriate (14.42), acting when situation demands (14.02), and acting with consistency and repetition (13.64) constitute average value processing skills. The mean scores of major skill components viz, choosing (42.73), prizing (28.73) and acting (28.73) is also average. The means score of all the seven value processing skills (99.12) shows that the value processing skills of secondary school students is average.

The value processing skills boys and girls vary with respect to the choosing component. Duncan's test shows that the mean scores of choosing component of value processing skills of Boys (54.85) and Girls (50.29) students are significantly different and it is clear that the choosing skill of boys is higher than that of girl students.

The value processing skills with respect to choosing, prizing and acting components of Hindu, Christian and Muslim secondary school students, and secondary school students of Government, Aided and Unaided schools do not vary.

The instructional material based on value analysis model of teaching is effective in developing the value processing skills – (Pre test mean scores 110.44, Post test mean scores 130.73) the choosing (42.40 and 57.29), prizing (28.84 and 37.69) and acting (27.74 and 35.76) components – of the students.

## **Tools and Materials Developed**

- Teachers' Value Processing Test
- Students' Value Processing Test
- Teachers' Value Processing Scale
- Students' Value Processing Scale
- Worksheet of Value Analysis Model
- The teachers developed a number of value conflicting situations as a part of the workshop.
- Lesson plans and lesson transcripts were evolved out of the workshop.

### **Details of the Publications Resulting From the Project Work**

'Strategies for developing Affective Domain Competencies' is a paper presented by the Principal Investigator and published in JEEVADHARA an International Journal. Two books are evolved out of the completed project.

1. Value Education – An Introduction
2. Value Analysis – Teacher's Handbook & Lesson Transcripts



## **Human Resource Trained & Developed**

- A resource team consisting of 15 Teacher Educators was evolved out of the UGC Major Research Project on Valuing. This team is able to handle classes on Value Analysis Model and can help others to improve the Value Processing Skills at the societal level.
- The number of additional human resource who have received training on Value Analysis Model was 25, which includes teachers of TTI and M. Ed scholars.
- At the end of the three days workshop the school teachers have evaluated the workshop, and they have appreciated the time management and proper utilization of time in the concerned sessions throughout the workshop, programme.
- The heads of many schools have invited the project team for giving training on VAM for other teachers in their schools.
- 150 Teacher Trainees of Teacher Education Colleges received training on Value Analysis Model.
- Around 1500 Secondary level Students will be benefited by the training given to the school teachers.

## **Workshops on Value Analysis Model Conducted During the Project Period**

### **Two-Day Workshop for Teacher Educators (21 & 22.Nov., 2007)**

Organized the Workshop on 'Value Analysis Model of Teaching' for Teacher Educators by St. Thomas College of Teacher Education, Pala under UGC Major Research Project on 21st and 22nd November, 2007.

### **One-Day Workshop for Teacher Educators (26.06.2008)**

During the two days workshop on VAM for Teacher Educators in the month November, it was decided to conduct one more workshop for Teacher Educators, prior to the workshop for Secondary level Teachers. Accordingly a One-day workshop was conducted for Teacher Educators on 26.06.08.

### **Three-Days Workshop for School Teachers (16.07. to 18.07.2008)**

As a part of the experimental study on the first level, the secondary school teachers of Kottayam District were given training on Value Analysis Model for three consecutive days from 16.07.08 to 18.07.2008

## **Outcomes of the Workshops Organized**

- A Teacher Educators Resource Team was evolved out of the UGC Major Research Project. This team is able to handle classes on Value Education especially on Analysis Model and can help others to improve the Value Processing Skill at a societal level.
- The main outcome of the workshop was that 36 school teachers have learned about the Value Analysis model of Teaching for developing Value processing skills. Through the workshop, the school teachers have sensitized the local problems and issues that deteriorate the Value system and realized their role in enhancing the value awareness of the students.
- The school teachers trained through the workshop developed a number of value conflicting situations to teach their students in the school.
- Fifteen lesson plans and lesson transcripts were evolved out of the workshop.
- Teachers have prepared their own worksheet of the value analysis model.
- Around 1600 Secondary level Students will be benefited by the training given to the School teachers.

## Papers Presented by the Principal Investigator in the Conferences During the Period of the Project

- Participated and presented a paper on “Creating a Compassionate community for the Differently Abled through Valuing” in the International Seminar on ‘Spreading Smiles in Education-Creating a Compassionate Community for the Differently Abled’ organized by St. John the Baptists College of Education and Special Education Nedumkunnam, Kerala on 18th and 19th February, 2008.
- Acted as Resource Persons and presented a theme paper on ‘Strategies for developing Affective Domain Competencies’ on the Seminar organized by School of Pedagogic Sciences, School of Gandhian Thought and Developmental Studies and Jeevadhara – A Socio-Religious Research Centre under Mahatma Gandhi University, Kottayam on 24th September, 2008. (Paper published in JEEVADHARA an International Journal).  
Organized and Acted as Resource Person in the Workshop on ‘Value Analysis Model of Teaching’ for Teacher Educators organized by St. Thomas College of Teacher Education, Pala under UGC Major Research Project on 21st and 22nd November, 2007 and on 26th June, 2008.
- Organized and Acted as Resource Person in the Workshop on ‘Value Analysis Model of Teaching’ for Teachers organized by St. Thomas College of Teacher Education, Pala under UGC Major Research Project on 16, 17, 18th July, 2008.
- Participated and Acted as Resource Person and presented a Paper on ‘National Curriculum Framework for School Education-2005’ in the Academic Discussion on ‘Recent Trends in Philosophical and Sociological Bases of Education’ organized by All Kerala Training College Teachers’ Association on 21st October, 2008, FN Participated and Acted as Resource Person and presented a Paper on ‘Critical Pedagogy – the Conceptual Framework’ in the Academic Discussion organized by All Kerala Training College Teachers’ Association on 21st October, 2008, AN.
- Prepared and published an article on ‘Education for Reflective Morality’ in SJAAN, published by St. John the Baptists College of Education Alumni Association, Nedumkunam.

### 3. UGC Minor Research Project ( Dr. T.C. Thankachan ) 2012 – 2014

Title	“Developing Emotional Competencies among adolescents through Experiential Learning- An experimental Study”
Duration	18 Months (1st August 2012 to 31st January 2014)
UGC Approval No. and Date	Letter No. MRP(H) 1710/11-12/KLMG025/UGC-SWRO dated 03-11-2011 (Project Sanctioned) Letter No. MRP(H) 1710/11-12/KLMG025/UGC-SWRO dated 31-07-2012 (First Installment Sanctioned)
Amount Sanctioned	Rs. 1,05,000/-
Date of Completion	31st January, 2014

Principal Investigator	Dr. T. C. Thankachan
Co- investigators	NIL

## Major Objectives of the Study

1. To identify the emotional competencies of adolescents.
2. To evolve an instructional package based on Experiential Learning Model to develop the emotional competencies of adolescents.
3. To find the effect of the instructional package based on Experiential Learning Model in developing the emotional competencies of adolescents.
4. To compare the emotional competencies of adolescents before and after the experiment according to a) Gender b) Locality c) Socio-Economic Status and d) Type of Management of the school.

## Instructional Model Used for the Study

Experiential Learning Model (ELM); In developing lesson transcripts, the theoretical constructs presented by David A Kolb and the learning cycle presented by the same author was used. The students have different situations and problem solving styles which is meant for gaining experiences through presenting and analyzing the social issues and situations. At the beginning of the next class there is a brief review of the previous session in which students can feedback their experiences, ask questions, seek clarification and reflect on the other socially relevant issues, etc. The various phases of Experiential Learning Model are followed by the investigator for preparing the teaching manual. The activities are grouped under the following four phases. Phase I: Concrete Experience: This includes; Introduction of the concept or problem, Teacher Provides concrete experience, Students form groups based on their learning styles, and Students are actively involved in the process. Phase II: Observation and Reflection: This phase includes; Students are actively engaged in the experiment, Students discuss about the experiment in their learning style groups, and Students analyze the data and form concepts in an organized way. Phase III: Abstract Conceptualization: In this phase, the steps are; Students inferring and personalizing, Students form different concepts about the topic, and Students define concepts themselves. Phase IV: Active Experimentation: This includes; Students realize the importance of the content in their real life, Students test the experiment in new situations, and Students identify life skills. The instructional material consists of fifteen lesson transcripts, which were prepared according to the syntax of the Experiential Learning Model.

## Instructional Materials Developed

Instructional material on Kolb's Experiential Learning is developed under different stages.

**Stage 1:** Fifteen transcripts on Experiential Learning Model developed by the Principal Investigator in consultation with the teacher educators and experts.

**Stage 2:** Validation of the lesson transcripts by expert Teacher Educators.

**Stage 3:** Preparation of the final material and the tools.

## **Tools Constructed**

One of the objectives of the project was to construct the research tool to measure the Emotional Competencies. Accordingly the Adolescents' Emotional Competency Scale was prepared by the principal investigator and Validated by experts in the field.

## **Human Resource Developed**

- A resource team consisting of 12 Teacher Educators was evolved out of the UGC Minor Research Project on emotional competencies and experiential learning.
- M Ed scholars of St. Thomas College of Teacher Education, Teachers of Teacher Training Course of St. Thomas TTI have attended the different programmes of the project.
- More than Five Hundred Adolescent students have got the benefit of Experiential Model of learning and its impact on emotional competencies.
- The research tools used in this study are going through the process of standardization.

## **Other Programmes:**

The Principal Investigator is taking classes through Experiential Learning and development of the emotional competencies among the Teacher Trainees of St. Thomas College of Teacher Education. Emotional Education to youth and different communities is another area where the Principal Investigator is actively involved in. The classes on solving life conflicts of children in different educational institutions are handled by the principal instigator.

## **Major Findings of the Study**

- The emotional competencies of students are average before the experiment. With respect to different emotional competencies, the students are higher in scores on motivation (62.88) and lower in Self-awareness (55.07). The mean scores for Self-awareness (24.78), Self-regulation (44.59), Motivation (37.73), and Empathy (42.98), of the students show the average emotional competencies before the experiment. The mean score (150.08) of the students achieve 58.85 % of scores of emotional competencies in pre-test which is average.
- The instructional material on Experiential Learning Model is prepared the principal investigator. The instructional material consists of fifteen lesson transcripts, which were prepared according to the syntax of the Experiential Learning Model. The activities are grouped under the following four phases.
  - Phase I: Concrete Experience
  - Phase II: Observation and Reflection:
  - Phase III: Abstract Conceptualization:
  - Phase IV: Active Experimentation:
- After the experiment, the post test scores differ significantly than that of the pre-test scores in their emotional competencies (t-value 187.78). It shows that the treatment through Experiential Learning Model is effective in developing emotional competencies of adolescents.

- The Kolb's experiential Learning model is effective in developing the emotional competencies with respect to all the sub-components such as self-awareness (t-value 94.99), self-regulation (t-value 86.57), motivation (t-value 96.47), and empathy (t-value 94.71).
- The 'gender of adolescent students' has not significantly influenced the different components of emotional competencies such as self-awareness (t-value 1.50), self-regulation (t-value 1.06), motivation (t-value 0.24), empathy (t-value 1.51) and the emotional competencies together (t-value 0.19) after the experiment. On the other hand, gender of students has significantly influenced the self-awareness (t-value 2.50) and empathy (t-value 2.97) components before the experiment. The study found that, Self-awareness and empathy are more among girls than boys before the experiment.
- The 'locality of adolescent students' has not significantly influenced the different components of emotional competencies such as self-awareness (t-value 0.52) and self-regulation (t-value 0.52) after the experiment. And it has significantly influenced the components such as motivation (t-value 2.79), empathy (t-value 2.51) and emotional competencies together (t-value 2.49) after the experiment. It is concluded that motivation, empathy and emotional competencies are more among rural students than the urban students after the experiment. On the other hand, gender of students has significantly influenced the self-awareness component (t-value 4.23) before the experiment. The study found that, Self-awareness is more among rural students than the urban students before the experiment.
- The 'socio-economic status of students' has not significantly influenced the self-awareness (t-values 1.29, 0.63), self-regulation (t-values 3.04, 0.38), motivation (t-values 1.89, 2.00), empathy (t-values 1.83, 0.46) and the emotional competencies together (t-values 2.04, 0.75) before and after the experiment. It means the students belongs to high, above average, average, below average and poor socio-economic status do not differ significantly in their emotional competencies and its different components before and after the experiment.
- The 'type of management of the schools of students' has significantly influenced the self-awareness (t-value 9.80), motivation (t-value 7.29), empathy (t-value 8.64) and emotional competencies together (t-value 15.02) after the experiment. The self-awareness, motivation, empathy and emotional competencies are higher in government school students after the experiment. On the other hand, type of management of the schools has significantly influenced the self-awareness component before the experiment. Self-awareness is more among aided school students than the government and unaided school students before the experiment. But after the experiment, self-regulation (t-value 2.33) has not significantly influenced the government, aided and unaided school students.

### **Contributions to the Society**

- The experiential learning model is more effective in developing emotional competencies. Therefore, experiential learning should be introduced at secondary level classes, including value education, moral redevelopment and areas of social concern.
- Instructional materials on Experiential Learning Model for developing emotional competencies can be used by others. Tools constructed can be further used for related studies. Such tools can be widely used in other parts of India to identify emotional competencies, developing the competencies, etc., of students of different categories.
- The students can implement and practically use the emotional competencies in their class and daily life through identifying and solving conflicts in life and related issues. Training the students in Experiential Learning will enhance the affective domain competencies of the future generation through modeling and transfer.

- The teachers and students can be properly directed towards their own emotional styles and they can select the methods accordingly. This will enhance the affective domain competencies especially the emotional competencies for better adjustment and for solving the life conflicts.
- Introducing Experiential Learning Model in faculty improvement programmes namely, orientation classes, refresher courses, seminars and workshops will give a positive outlook on the areas of current concern and will positively transfer all the emotional competencies to the students the coming generations.
- As the study has established the effectiveness of the model, the existing teachers and trainers can be given orientation and training on the development of instructional materials to teach at different levels. The NCERT, SCERT and DIETs should take up the responsibility of developing instructional materials for developing the emotional competencies of students at different levels.
- The present teacher training institutions can incorporate the components of emotional competencies and the techniques of experiential learning in their training procedure and curriculum and thereby, the would-be teachers will get adequate knowledge and skills with respect to affective domain competencies.
- A resource team consisting of teacher educators should be evolved to handle classes based on experiential learning model and can help others to improve the emotional competencies at the societal level. The instructional material evolved out of the research can be used by teachers for developing affective domain competencies, values, emotional maturity, social sensitivity, etc especially the teachers undergo the in-service training programme.
- The study reveals that it is necessary to the teachers, parents and pupils to work together towards an integrated approach to emotional education with special reference to developing emotional competencies among adolescents. Teachers and pupils will consciously link the emotional competencies with educational programmes, with home, community, media and other agencies and institutions.
- A study can be conducted to find out the comparative effects of different strategies and models of affective domain education. Similar studies can be conducted among primary, secondary and college level students including the teacher trainees. The present study can be extended to large sample including, illiterates, neo-literates, labourers, women, professionals, students and teachers.
- Similar studies can be conducted to identify values priorities, emotional maturity, emotional stability, social sensitivity, social awareness and to develop the skills of the teacher educators, teachers and teacher trainees and can be extended for designing instructional materials for developing social judgement ability, socialization process, value consciousness, reflective morality, etc. of students and people of different groups.

### **Papers Presented by the Principal Investigator During the Period of the Project**

1. "Development of Adolescents' Value Conflict Resolution skills through Value Analysis" in the edited book, Learning and Application, published by Department of Indian Studies, University of Malaya, Kaulalumpur, Malaysia and Anuragam, Chennai on August, 2012. ISBN 978-93-81568-58-3.
2. "Experiential Learning – A Model for Emotional Competency Development" in the UGC sponsored National Seminar on 'Educational Renaissance for a New Generation' held at St. Thomas College of Teacher Education, Pala, on 27th and 28th June, 2013. (published in the seminar proceedings ISBN 978-81-927201-1-1)

#### 4. UGC Minor Research Project ( Sr. Beenamma Mathew )

Title	“Effectiveness of Conceptual Change Models of Learning on Misconceptions in Mathematics among Secondary School students with different Learning Styles”.
Duration	18 months
UGC approval No. & date	MRP (H) -1708/11-12/kLMG 025/UGC-SWRO KLMG 025 Dated 3-11-2011
Amount approved	Rs. 77000/-
Date of completion	1-2-2014
Principle Investigator	Sr.Beenamma Mathew

#### Objectives of the Study

- To find out the existing Misconceptions in Mathematics among Secondary School Students
- To identify the Learning Styles of Secondary School Students
- To develop instructional materials using Conceptual Change Models of Learning to rectify Misconceptions in Mathematics among Secondary School Students
- To develop instructional materials using existing method to rectify Misconceptions in Mathematics among Secondary School Students
- To find out the effectiveness of Conceptual Change Models of Learning on the dependent variables formed by Misconceptions in Mathematics and Interest in Learning Mathematics among Secondary School Students
- To study the effectiveness of Conceptual Change Models of Learning on Misconceptions in Mathematics
- To find out the effectiveness of Conceptual Change Models of Learning on Misconceptions in Mathematics among Secondary School Students with different Learning Styles
- To compare the effectiveness of Conceptual Change Models of Learning on Misconceptions in Mathematics among Secondary School Students belonging to different Learning Style groups
- To study the effectiveness of Conceptual Change Models of Learning on Interest in Learning Mathematics among Secondary School Students

#### Instructional Materials Developed

Instructional materials in Mathematics based on 7E Learning Cycle Model.

## **Tools Constructed**

- Misconception Identification test
- Learning Style Inventory
- Mathematics Learning Interest Inventory
- Achievement Test in Mathematics

## **Papers Presented by the Principal Investigator During the Period of the Project**

1. Mathew ,Beenamma and Joseph ,Celene(2014) ‘Development of a Three-Tier test to assess students’ Misconceptions about basic concepts in Geometry’, published in the peer reviewed Journal of Education, ‘Educational extracts’ of St.Thomas College of Teacher Education Pala Vol.2 Issue1,January2014 with ISSN 2320-7612.
2. Mathew, Beenamma and Joseph, Celene (2014) ‘Misconceptions in Mathematics of Secondary School students with special reference to Learning Styles’ Published in the peer reviewed Journal of Education, ‘Educational extracts’ of St.Thomas College of Teacher Education Pala Vol.2 Issue2,June 2014 with ISSN 2320-7612.

## **Journal Articles Accepted for Publication**

Mathew, Beenamma and Joseph, Celene (2014) ‘Effectiveness of 7E Learning Cycle Model on Achievement in Mathematics’ in the peer reviewed Journal of Education ‘TITUS TRACKS’ of Titus 11Teachers college Tiruvalla, Kerala, SouthIndia on Vol.4 Issue1 January 2014 with ISSN 2348-4527

## **Papers Presented by the Principal Investigator in Various Conferences**

1. Paper titled “7E Learning Cycle – A strategy to Inculcate Peace Values through Mathematics” in the International Seminar on ‘Peace Education: An Orientation for GEN next’ organized by CTE Kerala state centre and St. Thomas College of Teacher Education, Pala on 13th & 14th August, 2010.
2. Paper titled “Addressing Misconceptions in Peer Groups- A Strategy for Developing Social Skills” in the UGC sponsored National Seminar on ‘Education and Social Sensitivity’ held at St. Thomas College Pala, on 25th & 26th November 2010.
3. Paper titled “7E Learning Cycle- A Constructivist Model for Tackling Misconceptions” in the UGC sponsored National Level Conference on Learning Innovation in Science Education, P.K.M. college of Education, Madampam on 2nd and 3rd February 2012.

## **Findings of the Study**

1. Students have different Learning styles. The order of domination is Reading/Writing, Kinesthetic, Auditory, Others, and Visual respectively
2. There is significant effect of Conceptual Change Models of Learning when compared with Existing Method on Misconceptions in Mathematics
3. There is no significant effect of Conceptual Change Models of Learning when compared with Existing Method on Interest in Learning Mathematics.



4. There is significant effect of Conceptual Change Models of Learning when compared with Existing Method on Achievement in Mathematics.
5. There is no significant effect of Conceptual Change Models of Learning when compared with Existing Method on Misconceptions in Mathematics with different Learning Style preferences
6. There is significant effect of Conceptual Change Models of Learning when compared with Existing Method on the dependent variables Misconceptions in Mathematics, Interest in Learning Mathematics and Achievement in Mathematics

### 5. UGC Minor Research Project ( Sr. Mary Thomas )

Title	“Effect of Cognitive Acceleration Approach on Thinking Skills and Achievement in Chemistry among Students of Standard VII”.
Duration	18 months (1st May, 2011 to 31st October 2012)
UGC approval No. & date	F. MRP(H)-1418/10-11/KLMG025/UGC-SWRO, dated 10th February 2011
Amount approved	Rs. 65,000/-
Date of completion	31st October, 2012
Principle Investigator	Sr. Mary Thomas

### Objectives of the Study

1. To prepare instructional material in chemistry based on cognitive acceleration approach for secondary school students of Kerala state.
2. To find out the effect of cognitive acceleration approach on the dependent variables when compared with existing method among secondary school students of Kerala state.
3. To find out the effect of cognitive acceleration approach on Achievement in Chemistry when compared with existing method among secondary school students of Kerala state
4. To find out the effect of cognitive acceleration approach on Achievement in Chemistry in terms of its cognitive components when compared with existing method among secondary school students of Kerala state.
5. To find out the effect of cognitive acceleration approach on Thinking skills when compared with existing method among secondary school students of Kerala state
6. To find out the effect of cognitive acceleration approach on Thinking skills when compared with existing method among secondary school students of Kerala state in terms of its component variables.
7. To find out the effect of cognitive acceleration approach on Attitude towards Science learning when compared with existing method among secondary school students of Kerala state

## **Instructional Materials Developed**

Instructional material in Chemistry based on cognitive acceleration approach

## **Tools Constructed**

- Achievement test in chemistry developed and standardized by the investigator.
- Test on Thinking skills in Chemistry developed and standardized by the investigator

## **Papers Presented by the Principal Investigator During the Period of the Project**

Thomas Mary and Joseph Celene (2012), "Thinking Skills and Attitude towards Science Learning" Edu world , 1(1), 102-111, APH Publishing Corporation

## **Papers Presented by the Principal Investigator in the Conferences During the Period of the Project**

- Thomas, Mary and Joseph, Celene (2010) "Developing peace skills through Cognitive acceleration; an analysis of critical thinking", International Seminar on Peace Education : An Orientation for Gen Next, Council of Teacher Education and St. Thomas College of Teacher Education, Pala.
- Thomas, Mary and Joseph, Celene (2010) "Developing Social skills through Solving Cognitive conflicts in classrooms", UGC sponsored National Level Seminar on Education and Social Sensitivity, St. Thomas College of Teacher Education, Pala. These papers are published in the concerned Seminar Proceedings

## **Findings of the Study**

- Cognitive Acceleration Approach has significant effect on the dependent variables when compared with existing method among secondary school students of Kerala state
- Cognitive Acceleration Approach has significant effect on Achievement in Chemistry when compared with existing method among secondary school students of Kerala state
- Cognitive Acceleration Approach has significant effect on Achievement in Chemistry in terms of its cognitive components when compared with existing method among secondary school students of Kerala state.
- Cognitive Acceleration Approach has significant effect on Thinking skills when compared with existing method among secondary school students of Kerala state
- Cognitive Acceleration Approach has significant effect on thinking skills when compared with existing method among secondary school students of Kerala state in terms of its component variables.
- Cognitive Acceleration Approach has significant effect on Attitude towards Science learning when compared with existing method among secondary school students of Kerala state

## 6. Minor Research Project ( Sr. Shalby P Jose )

Title	“Effect of Cognitive Apprenticeship Model on Achievement and select Social skills among the commerce Students of Higher Secondary Schools in Kerala state. ”.
Duration	18 months
UGC approval No. & date	MRP(H)-922/09-10/KLMGo25/UGC-SWRO
Amount approved	Rs. 55000/-
Date of completion	Completed
Principle Investigator	Sr. Shalby P Jose
Co- Investigator	Dr. PP Shajimon

### Objectives of the study

- To prepare an instructional material for the first year Higher Secondary students in Commerce by using Cognitive Apprenticeship Model.
- To equate the selected groups for the study on the basis of scores on the previous Achievement Test.
- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the dependent variables namely, Achievement, social skills and components of Social Skill and Attitude towards Commerce learning among Higher Secondary Commerce Students of Kerala State.
- To compare the effect of Cognitive Apprenticeship Model with existing method of teaching on the means of scores on Achievement test among the Higher secondary Commerce students of Kerala state.
- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the means of scores on social skills among the Higher Secondary Commerce students of Kerala State.
- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the means of scores on the Skill of Communication among the Higher Secondary Commerce students of Kerala state.
- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the means of scores on the Skill of Co-operation among the Higher Secondary Commerce students of Kerala state.

- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the means of scores on the Skill of Social Responsibility among the Higher Secondary Commerce students of Kerala state.
- To compare the effect of Cognitive Apprenticeship Model of teaching with existing method on the means of scores on the Skill of Leadership among the Higher Secondary Commerce students of Kerala state.
- To compare the effect of Cognitive Apprenticeship Model with existing method on the means of scores on Scale Attitude towards Commerce Learning among the Higher Secondary Commerce students of Kerala state.

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

- The effect of cognitive Apprenticeship Model of teaching is significant when compared with existing method for improving the combined dependent variable formed by Achievement, Social Skills, Skill of Communication, Skill of Co- operation, Skill of Social Responsibility, Skill of Leadership, Attitude towards Commerce Learning among Higher Secondary commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for improving Achievement among the Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for improving Social Skills among Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for improving skill of Communication among Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for improving skill of Co-operation among Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for improving skill of Social Responsibility among Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is not significant when compared with existing method for improving skill of Leadership among Higher Secondary Commerce Students of Kerala State.
- The effect of Cognitive Apprenticeship Model is significant when compared with existing method for promoting Attitude towards Commerce Learning among Higher Secondary Commerce Students of Kerala State.

### **Papers Presented by the Principal Investigator Related to the Project in Seminar**

1. Effect of Cognitive Apprenticeship Model in developing social skills at Higher secondary Level.
2. Cognitive Apprenticeship Model- An innovative teaching learning strategy.

## 7. UGC Minor Research Project ( Dr. Sr. Celene Joseph ) 2007 – 2009

Title	“Effect of constructivist approach in learning physics on select enquiry skills, attitude towards scientific inquiry and achievement in under graduate physics teaching”
Duration	2 Years (1st April, 2007 to 31 st March 2009)
UGC Approval No. and Date	MRP(H)_695/20079(Xplan)/KLMG025/UGC-SWRO
Amount Sanctioned	Rs. 70,000/-
Date of Completion	31 st March 2009
Principal Investigator	Dr.(Sr.) Celene Joseph
Co- investigators	Sr. Mary Thomas

The UGC Minor Research Project entitled “”Effect of constructivist approach in learning physics on select enquiry skills, attitude towards scientific inquiry and achievement in under graduate physics teaching undertaken byDr. (Sr.)Celene Joseph was completed. The major findings and achievements of the project are given below.

### Major Findings of the Study

- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving the combined dependent variable formed by Inquiry Skills, skill of drawing inference, skill of hypothesizing, skill of experimenting, Attitude towards scientific inquiry, Interest in Inquiry and Achievement in Physics among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving Inquiry Skills among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving the skill of drawing inference among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving the skill of hypothesizing among the under graduate students in Kottayam district.

- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving the skill of experimenting among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for improving achievement in Physics among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method for promoting Attitude towards scientific inquiry among the under graduate students in Kottayam district.
- The effect of Constructivist Approach in teaching Physics is significant when compared with existing method among the under graduate students in Kottayam district.

### **Tools and Materials Developed**

Test on Inquiry Skills- Developed and standardized by Joseph Celene (2008)

- Scale of Attitude towards scientific inquiry- Developed and standardized by Joseph Celene (2008)
- Inquiry interest inventory- Developed and standardized by Joseph Celene (2008)
- Instructional Material by using Constructivist Approach- Developed by the investigators
- Instructional material by using existing method- Developed by the investigators
- Achievement test in Physics-developed by the investigators

### **Details of the Publications Resulting from the Project Work**

1. Book on Constructivist approach: Theory and Practice
2. Report of the project

## **8. UGC Minor Research Project ( Sunu Austin ) 2013- 2015**

Title	“Effectiveness of Reflective Teaching Method in Developing Peace Values among the pupils of Standard Seven”
Duration	2 Years (September 2013 to September 2015)
UGC Approval No. and Date	MRP(H)-583/12-13/KLMG025/UGC-SWRO dtd 29/03/13
Amount Sanctioned	Rs. 130000/-
Date of Completion	31st May 2015
Principal Investigator	Sunu Austin

Co- investigators	Nil
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## **Objectives**

- To analyse the distribution of the pretest and posttest scores on Peace Values, and the scores on the covariates (a) Emotional Intelligence and (b) Socio-Economic Status of the pupils in the experimental and control groups
- To find out the relationship among the pretest scores on Peace Values and the scores on the covariates (a) Emotional Intelligence and (b) Socio- Economic Status of the pupils of Standard Seven
- To compare the pretest scores on Peace Values and the scores on the covariates (a) Emotional Intelligence and (b) Socio-Economic Status of the pupils in the experimental with that of the control group
- To compare the pretest and posttest scores on Peace Values of the pupils in the experimental group
- To compare the pretest and the posttest scores on Peace Values of the pupils in the control group
- To compare the posttest scores on Peace Values of the pupils of the experimental group with that of the control group
- To find out the effect of the Reflective Teaching Method over the existing Activity Oriented Method, with respect to the posttest scores on Peace Values, when the effects of the pretest scores on Peace Values and the scores on the covariates (a) Emotional Intelligence and (b) Socio-Economic Status are controlled
- To find out the effect of the Reflective Teaching Method over the Activity Oriented Method, with respect to the posttest scores on the components of Peace Values, when the effects of the pretest scores on Peace Values and the scores on the covariates (a) Emotional Intelligence and (b) Socio-Economic Status are controlled
- To compare the posttest scores on Peace Values among the pupils in the experimental group at different levels of Emotional Intelligence
- To compare the posttest scores on Peace Values among the pupils in the experimental group at different levels of Socio-Economic Status
- To compare the posttest scores on Peace Values of the pupils in the experimental group with respect to gender

## **Instructional Materials Developed**

Instructional material in Peace Values based on Reflective Teaching Method

## **Tool Constructed**

Peace Values Scale

## **Paper Published**

1. Mollykutty.T.M, and Austin, Sunu .“Peace Values of Elementary School Students”, Educational Extracts, ISSN No.2320-7612. 3(1), Jan 15

2. Mollykutty.T.M, and Austin, Sunu “Reflective Teaching Practices of Higher Secondary School Teachers”, accepted for publication in G.C.T.E. Journal of Research and Extension in Education.

### **Major Findings of the study**

The findings and conclusions of the present study are given below.

1. There is significant relationship among the scores on (a) Peace Values and Emotional Intelligence, (b) Peace Values and Socio-Economic Status and (c) Emotional Intelligence and Socio-Economic Status among the pupils of Standard Seven.
2. There is no significant difference in the pretest scores between the pupils in the experimental and control group on total scores of Peace Values and the components of Peace Values namely, Harmony, Tolerance, Interdependence, Empathy and Compassion. However, there is significant difference in the pretest scores on the component Love .The result indicates that there is no significant difference in the pretest scores on Peace Values between the pupils in the experimental and control groups except for the component Love.
3. There is significant difference between the pretest and posttest scores of the pupils in the experimental group on total scores of Peace Values and the components of Peace Values namely Love, Harmony, Tolerance, Interdependence, Empathy and Compassion. Therefore, it is concluded that the Reflective Teaching Method is effective for developing Peace Values and the components of Peace Values Love, Harmony, Tolerance, Interdependence, Empathy and Compassion.
4. There is significant difference between the pretest and posttest scores of the pupils in the control group on total scores of Peace Values and the components of Peace Values namely, Tolerance, Interdependence, Empathy and Compassion. However, there is no significant difference between the pretest and posttest scores for the components Love and Harmony. Therefore, the Activity Oriented Method is effective in developing Peace Values except for the component Love and Harmony.
5. There is significant difference between the posttest scores of the pupils in the experimental and control groups on the total scores on Peace Values and the components of Peace Values namely, Love, Harmony and Empathy. However, there is no significant difference between the posttest scores of the pupils in the experimental and control groups on the components Tolerance, Interdependence and Compassion. Therefore, the Reflective Teaching Method is effective in developing Peace Values except for the components Tolerance, Interdependence and Compassion
6. There is significant effect of the Reflective Teaching Method over the Activity Oriented Method on the components of Peace Values namely, Love, Harmony, Interdependence, Empathy and Compassion when the effects of pretest scores on Peace Values, and the scores on Emotional Intelligence and Socio-Economic Status are controlled. However, there is no significant effect of Reflective Teaching Method over the Activity Oriented Method on the component Tolerance.
7. There is no significant difference in the posttest scores on Peace Values among the pupils in the experimental group at different levels of Emotional Intelligence by controlling the effects of Socio Economic Status and pretest on Peace Values. Therefore, the investigator



inferred that the Emotional Intelligence does not influence the performance of the pupils exposed to the Reflective Teaching Method, with respect to Peace Values.

8. There is no significant difference in the posttest scores on Peace Values among the pupils in the experimental group at different levels of Socio-Economic Status by controlling the effects of Emotional Intelligence and pretest on Peace Values. Therefore, the investigator inferred that Socio Economic Status does not influence the performance of the pupils exposed to the Reflective Teaching Method, with respect to Peace Values.
9. There is no significant difference between the boys and girls exposed to the Reflective Teaching Method in the posttest scores on the components of Peace Values namely, Love, Harmony, Tolerance, Interdependence, Empathy, Compassion and total scores on Peace Values. In other words gender difference does not influence the performance of the pupils exposed to the Reflective Teaching Method.

### 9. UGC Minor Research Project ( Gilu G. Ettaniyil )

Title	“Study of Information Literacy Skills and Academic Achievement of Secondary Level Teacher Trainees in Kottayam District”
Duration	2 Years (September 2013 to September 2015)
UGC Approval No. and Date	MRP(H)-584/12-13/KLMG025/UGC-SWRO dtd 29/03/13
Amount Sanctioned	Rs. 65000/-
Date of Completion	31st September 2015
Principal Investigator	Gilu G. Ettaniyil
Co- investigators	Nil

#### **Objectives**

- To study the Information Literacy Skills of Secondary Level Teacher Trainees of Kottayam District.
- To study the Academic Achievement of Secondary Level Teacher Trainees of Kottayam District
- To study the Relationship between Information Literacy Skills and Academic Achievement of Secondary Level Teacher Trainees of Kottayam District
- To study whether the High, Average and Low skilled Teacher Trainees in Information Literacy are differed in their academic achievement
- To study whether any gender differences in Information Literacy among Secondary Level Teacher Trainees of Kottayam District

- To study whether student teachers belonging to different streams of academic disciplines are differ in Information Literacy Skills.

## 10. UGC Minor Research Project ( Pratheesh Abraham ) 2014 – 2016

Title	“Effect of Reflective Language Acquisition Model on the Speaking Skills in English among Secondary School Students of Kerala”
Duration	June 2014 to June 2016
UGC Approval No. and Date	UGC letter No. MRP (H)-1256/13-14/KLMG025/UGC-SWRO
Amount Sanctioned	1, 45,000/-
Date of Completion	June 2016
Principal Investigator	Pratheesh Abraham
Co- investigators	Nil

### Objectives of the Study

- To develop a Reflective Language Acquisition Model (RLAM) for teaching English language at secondary school level.
- To develop instructional materials by using Reflective Language Acquisition Model (RLAM) for teaching English language at secondary school level.
- To compare the effect of RLAM for improving the components of oral communication skills namely,
  - task completion
  - comprehensibility
  - fluency
  - pronunciation
  - vocabulary
  - language control in English

### Tools Constructed

- Reflective Language Acquisition Model (RLAM) for speaking English was developed by the investigator.
- Learning package by using Reflective Language Acquisition Model (RLAM) for Speaking English was developed by the investigator.
- Rubric for evaluating oral communication skills in English was developed

## Paper Presented During the Period of Project

Skill empowered Education: A key to Societal Progress”, presented in a National seminar at Central University of Kerala, Kasaragod.

## Findings of the Study

- There is significant difference in pretest scores and post test scores in task completion component of oral communication skills among the secondary school students. Therefore, Reflective Language Acquisition Model is effective in developing the skill of elaborating a content appropriately in English corresponding to the theme given.
- There is significant difference in pretest scores and post test scores in comprehensibility component of oral communication skills among the secondary school students. Therefore, Reflective Language Acquisition Model is effective in developing the skill of expressing a content comprehensively in English requiring no interpretation on the part of the listener.
- There is significant difference in pretest scores and post test scores in fluency component of oral communication skills among the secondary school students. Therefore, Reflective Language Acquisition Model is effective in developing the skill of expressing a content continuously in English speech with few pauses or stumbling.
- There is significant difference in pretest scores and post test scores in vocabulary component of oral communication skills among the secondary school students. Hence, Reflective Language Acquisition Model is effective in developing the skill of expressing words continuously in English with adequate and accurate use of vocabulary.
- There is no significant difference in pretest scores and post test scores in language control component of oral communication skills among the secondary school students. Therefore it is concluded that, the control over the structures of a foreign language cannot be easily attained within a period of three weeks.
- There is no significant difference in pretest scores and post test scores in pronunciation component of oral communication skills among the secondary school students. The reason might be that the time for the experiment conducted was not sufficient enough to develop pronunciation of a foreign language with an entirely different pattern of the production of sounds.

## 11. Summary of the UGC Minor Research Project (Dr. Shajimon P.P.)2014 – 2016

Title	“Influence of Constructivist Approach on Social Sensitivity Non-Violence and Constitutional Values Among Secondary School Students”
Duration	2 Years (June2014 to June2016)

UGC Approval No. and Date	MRP(H)-1257/13/14/KLMG025/UGC-SWRO dtd 28/03/14
Amount Sanctioned	Rs. 115000/-
Date of Completion	30st June 2016
Principal Investigator	Dr.P.P.Shajimon
Co- investigators	Nil

The present study has been designed to examine the effect of Constructivist Approach on Social Sensitivity, Non-Violence and Constitutional Values among Secondary School Students.

### **Objectives of the Study**

- To prepare an instructional material for students of standard IX Social Science Syllabus using Constructivist Approach.
- To study the effect of Constructivist Approach on developing Social Sensitivity among Secondary School Students.
- To study the effect of Constructivist Approach on developing Non-Violence among the Secondary School Students.
- To study the effect of Constructivist Approach on developing Constitutional Values among the Secondary School Students
- To study the effect of Constructivist Approach on developing each of the Constitutional Values selected.
  - Democratic Values
  - Socialistic Values
  - Secularistic Values

### **Methodology in Brief**

The Experimental Method was adopted for the study. The design selected for the present study is Single Group Pre-test Post-test Design.

#### **Variables of the Study**

*Independent Variable* : Instruction using Constructivist Approach.

*Dependent Variable*: Social Sensitivity ,Non-Violence and Constitutional Values

Sample for the Study

The sample for the study consists of 40 Secondary School Students.

### **Tools Used**

- Instructional Material based on Constructivist Approach, prepared by the investigator
- Social Sensitivity Scale, developed by the investigator
- Non-Violence Scale, developed by the investigator

- Constitutional Values Scale, developed by the investigator

#### Statistical Techniques Used

- Mean
- Standard Deviation
- Test of Significance of the difference between Means (t-test)

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

- The means of scores on Social Sensitivity in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on Social Sensitivity in the post test is significantly higher than that of the pre-test.
- The means of scores on Non-Violence in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on Non-Violence in the post test is significantly higher than that of the pre-test.
- The means of scores on the three combined Constitutional Values in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on in the post test is significantly higher than that of the pre-test.
- The means of scores on Democratic Values in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on Democratic Values in the post test is significantly higher than that of the pre-test.
- The means of scores on Socialistic Values in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on Socialistic Values in the post test is significantly higher than that of the pre-test.
- The means of scores on Secularistic Values in the pre-test and post test using Constructivist Approach of Teaching is significantly different. The means of scores on Secularistic Values in the post test is significantly higher than that of the pre test

### **Conclusions of the Study**

- The Constructivist Approach has significant effect on promoting Social Sensitivity among Secondary School Students.
- The Constructivist Approach has significant effect on promoting Non-violence among Secondary School Students.
- The Constructivist Approach has significant effect on promoting the major Constitutional values among Secondary School Students.
- The Constructivist Approach of teaching has significant effect on promoting Democratic values among Secondary School Students.
- The Constructivist Approach of teaching has significant effect on promoting Socialistic values among Secondary School Students.
- The Constructivist Approach of teaching has significant effect on promoting Secularistic values among Secondary School Students.

The study convincingly and conclusively revealed that the instructional material prepared by the investigator using Constructivist Approach was effective in developing Social Sensitivity, Non-Violence and Constitutional Values among Secondary School Students