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Review of Related Literature
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Review of Related Literature

3.1.0 Introduction:

Man is the only animal which builds upon the accumulated and recorded knowledge of the past. By constant addition to knowledge reservoir, progress happens to all human endeavours. Research is also a human endeavour. A researcher has to be familiar with previous knowledge of theories and research conducted in the past. So, to ensure this familiarity, every research work has a section on review of related literature.

Review means to organise the past knowledge to evolve an edifice of knowledge. The term literature in research methodology means knowledge of theoretical, practical and research aspects of any particular area.

According to W.R. Borg (1963)¹

"The literature in any field form the foundation upon which all future work will be built. If we fail to build upon the foundation of knowledge provided by the review of literature, our work is likely to be shallow and naive and will often duplicate work that has already been done by someone else."

3.2.0 Importance of review of related literature:

The review of related literature is essential in any research. It gives a clear indication of the direction. It equips the researcher with up-to-date information regarding the subject which is a pre-requisite for planning and execution of every research. It also helps in avoiding replication of past studies and most importantly it provides the rationale for the current study.

Bruce W. Tuckerman (1978)² has enumerated following purposes of the review

1. Discovering important variable

2. Distinguishing what has been done from what needs to be done.

3. Synthesizing the available studies to have a perspective.

The review of literature serves two purposes of (i) putting hypotheses in its proper context and (ii) letting readers know that the researcher is aware of the subject.
Review of related literature also serves the following purposes.

(1) Provides theories, ideas or hypotheses useful in forming new problems.

(2) Indicates if available evidences solve the problem without requiring further investigation.

(3) Provides sources for hypotheses.

(4) Suggests methods, procedures, sources and statistical techniques suitable to the problem.

(5) Locates comparative data and findings useful in the interpretation and discussion of results.

(6) Helps in developing good command over the subject.

(7) Contributes by providing accurate knowledge.

The review of literature provides very useful insights regarding past studies which enables the investigator to improve his own work. It also helps in identifying the gaps in past researches which can be considered by the researcher in his study.

Many past researches are reviewed in this chapter. They are presented according to the geographical area i.e. International studies followed by national studies and than State level studies. Out of them, 18 are presented in detail.

3.3.0 International research studies.

- Vanderstoep et. al (2006)\(^3\) found in their study that knowledge, motivation and self-regulation distinguished high and low achieving students form English, Psychology and Biology subject at college level.

- Zimmerman and Martinez – Pons (1990)\(^4\), In their study of self-regulated learning and self-efficacy found that both were correlated. Older students showed more self-efficacy than younger ones.

- Pajeres and Valiante (2002)\(^5\), in their study on academic achievement among children and adolescents found girls showed more confidence in their ability to self-regulate in learning tasks.

- Peklaj and Peejak (2002)\(^6\) found that girls were more aware about the role of thinking in self regulation of learning. They used more metacognitive strategies more and were motivated than boys to express feelings related to learning.

- Zimmerman and Martinez – Pons (1990)\(^7\) interviewed the students of fifth, eighth and eleventh grades to study gender differences in use of self-regulated learning strategies. Girls displayed more goal setting, planning strategies and
self-monitoring than boys and also surpassed them in their ability to structure their environment for optimal learning.

- Pokay and Blumenfeld (1990)\(^8\) found that girls used more cognitive and metacognitive strategies and also displayed better strategy management.

- Humphrey (et. al) (2007)\(^9\) found that emotional processing was an important component of rational thought so cognitive and emotional processes could not be separated.

- Abisamra (2000)\(^10\) reaffirmed that Emotional Intelligence affects student achievement so it was imperative for schools to integrate it in their curricula.

- Paker (et. al) (2004)\(^11\) found that emotional and social competencies were strong predictors of academic success.

- Low and Nelson (2004)\(^12\) established Emotional Intelligence skills as key factors in academic achievement and test performance.

- Petrides (et. al.) (2004)\(^13\) examined the relationship between Emotional Intelligence (EI) with cognitive ability and academic performance and found that EI moderated the relationship between academic performance and cognitive ability. Higher IQ and higher EQ both led to greater academic performance. EQ also helped in curbing deviant behaviour like unauthorised absence and expulsions.

The information of some studies carried out abroad were available in detail. Hence, they are recorded here.

3.3.1 **Researchers :- Wayne T. Gordon (et. al.)\(^14\)**

**Title :-** A factor Analytic Study of the self-regulated learning inventory.

**Place :-** Western Illinois University, USA


The self regulation inventory was developed to understand the concept of Self-Regulated Learner (SRL) and to identify behaviours needed by students for academic success. Final version (3.0) of the inventory contained 80 items, divided equally on four subclass of (1) Executive processing (2) Cognitive
processing (3) Motivation and (4) Environment control / utilization. Each item was responded on a 5 point rating scale ranging from Almost Always typical of me (5) to Not at all typical of me (1). So the total score ranged from 80 to 400. The study was done on a sample of 281 students (191 female and 90 male). There were 219 undergraduates and 62 graduates. Each factor and total inventory showed high internal reliability. The correlation between the total score and GPA (Grade Point Average) was highly significant. Alpha for SRL total was 0.93. Factor analysis revealed four factors but were not very clear because number of items from each subject were loading on each factor. But the result showed a strong relationship between self-regulated learning and GPA (Grade Point Average)

3.3.2 Researchers :- Wei Zheng (et. al.)

Title :- Synergize Creativity, Self-regulated learning and Motivation through Cyber infrastructure enabled problem / project base learning.

Place :- Jackson state university, MS, USA

Year :- 2007-2008

Source :- American Education Science Review vol. 1, No. 1

The main theme of the paper was to present a new Instruction and Cognition Model (ICM) that synergizes creativity, self-regulated learning and motivation and to explore its application into cyber infrastructure enabled problem / project based learning for cultivating creativity and self-regulated learning skills of engineering students.

A new holistic Instruction and Cognition based Model (ICM) of Self-Regulated Learning and Creativity (SRLC) was formed to self-monitor and self-correct these three aspects of Motivation, Metacognition and Strategic action. This was a cyclic model consisting four phases.

1st Phase : Planning and Designing instructions.

2nd Phase : Giving priority to available resources

3rd Phase : Taking necessary actions and monitoring them

4th Phase : Evaluating and controlling all actions for desired result
Pre-tests and post-tests were used to evaluate learning outcomes by measuring changes in student's knowledge on creativity and its strategies. The results indicated nearly 20% gain in creativity and self-regulated learning skills. This indicates that SRLC model synergised creativity, self-regulated learning and motivation and has the potential to lead to the enhancement of student's creativity and self-regulated learning skills.

3.3.3 Researchers :- David Whitebread (et. al.)

Title :- The development of two observational tools for assessing Metacognition and Self-regulated learning in young children.

Place :- University of Cambridge, UK

Year :- 2008


This paper reports an observational study of young children's metacognitive and self-regulatory ability and the development of an observational framework designed as a research tool and an observational checklist designed for use as an assessment instrument by teachers. The main research question was whether metacognitive abilities are relatively late developing or could they be observed in younger children.

Two observation tools were developed (1) the C. Ind. Le Coding framework to identify verbal and non verbal indicators of metacognition and self-regulation and (2) the Children's Independent Learning Development (CHILD 3.5) checklist as a practical assessment test for classroom teachers.

The study involved 1440 children, half from younger nursery class and other half from older reception class. It involved 16 teachers in the first year and 32 teachers in the second year. The teachers were selected on the basis of high level skill and willingness to engage in innovative practices. The teachers developed innovative learning activities which facilitated metacognitive and self-regulatory performance. Children were video graphed while undertaking their activities to identify relevant events. Children were also assessed against 35 standards on four point rating scale.
The observational coding framework proved to be a valuable tool by providing evidences of verbal and non verbal indicators of metacognitive and self regulatory processes. It was also proved that CHILD-3.5 instrument enhances teacher's understanding about the significance of metacognition and self-regulation in the development of young children as learners.

3.3.4 Researchers: - Kincanon, Joyce (et. al.)

Title: - The effects of metacognitive training on performance and use of metacognitive skills in self-directed learning situations.

Place: - Houston, USA

Year: - 1999

Source: - National convention of the Association for Educational Communications and Technology.

The research examined the effect of teaching metacognitive strategies on performance in self-directed learning situation. Total of 60 participants (22 male and 38 female) university students enrolled for a non-art major photography course. The treatment given was embedded instruction and practice in reflection, planning and evaluation. The participants were given 10 three hour sessions in which metacognitive training was embedded with the context. Several videotapes of famous artistes were shown to illustrate metacognitive strategies such as planning, monitoring and knowledge assessment. Metacognitive awareness was measured prior to and after the treatment with the help of Metacognitive Awareness Inventory (MAI) designed by Schraw and Dennison (1994). The use of metacognitive strategies was measured by a self report survey following the first and last assignment. The assignments were identical and assessed change in performances.

Results indicated that the treatment had a positive effect on learning. The change in metacognitive awareness led the researchers to conclude that instructional strategies teaching metacognitive skills improve the use and awareness about these skills and performance.

Major implication of the study was that exercises should be embedded with content to improve metacognitive skills. This will help students to become aware of what they know, plan for what they need to learn and
monitor their strategy choices. To become self-directed learners, another important observation was that some students despite possessing metacognitive skills did not use them, therefore motivating strategies should also be embedded along with metacognitive practices within content delivery.

3.3.5 Researchers: Rayne A Sperling (et. al.)

Title: Metacognition and Self-Regulated Learning Constructs.

Place: USA

Year: 2002


The study addresses correlations among three well accepted self-regulated variables of Metacognition, Academic strategy use and Motivation. The research work was carried out in two phases as study I and study II. The work addressed four main goals to examine self-regulated learning constructs.

1. Correlations among metacognitive constructs and between measures of metacognition
2. Relationship between learning strategy use and metacognition.
3. Relationship between metacognition and achievement.
4. Relationship between measures of metacognition and motivational variables.

The first study had 109 first year students of a north eastern college. Materials administered included Metacognitive Awareness Inventory (MAI) (Schraw A Denison, 1994), Learning Strategies Survey (LSS) (Kardash and Amlund, 1991).

Results showed a strong correlation (r = 0.75, P<0.001) between knowledge of cognition and regulation of cognition. It also showed a significant correlation (r=0.50, P<0.001) between MAI total and LSS total. But there was little relationship between academic achievement variables and metacognition r = 0.01 (SAT verbal) and r = 0.042 (SAT Math)

The second study was conducted on 40 education majors with at least sophomore standing. It examined correlation between three measures of
metacognition and correlations between the MAI and strategy use and academic motivation. Materials used included MAI, the Motivated Strategies Learning Questionnaire (MSLQ) (Garcia & Pintrich, 1995) and confidence judgements of test taking.

Findings revealed a significant correlation between knowledge of cognition and regulation of cognition at \( r = 0.68, P<0.001 \) on MAI. Correlation between total MAI scores and the Metacognitive Self-Regulation Learning Questionnaire of MSLQ was \( r=0.59, P<0.001 \). The Correlation between LSS and MAI total was \( r = 0.60, P<0.001 \). But the correlations between overall Metacognition and accuracy measures were inconclusive. Motivation scales were significantly related to total metacognition (\( r=0.40, P<0.05 \))

Across both studies, knowledge and regulation components of metacognition were strongly related to each other. There were also positive and significant correlations between metacognition and strategy use measures. Findings indicated negative correlations between SAT-Math and measures of metacognitive awareness. Finally, the findings revealed moderate correlation between metacognition and motivation than for metacognition and strategy use.

3.3.6 Researchers :- Cetinkaya Pelin and Erktine Emine

Title :- Assessment of Metacognition and its relationship with reading comprehension, achievement and aptitude.

Place :- Bogazici University, Istanbuls.

Year :- 2002


The main purpose of the study was to construct a tool to assess metacognition of Turkish regular and gifted pre-adolescents. In the first phase of study, a metacognition inventory consisting four subscales of (1) Evaluation (2) Self-checking (3) awareness and (4) cognitive strategies was developed. In the second phase, correlations of metacognition with (1) Reading comprehension, (2) Achievement and (3) Aptitude were studied.

The study was conducted on 60 Boys and 51 Girls of sixth grade students from a private school in Istanbuls. Alpha coefficient (Cronbach \( \alpha \)) was
computed to establish internal consistency and it was 0.87. Factor analysis and score plot confirmed four factors (dimensions) of metacognition inventory as Self-checking, Awareness, Cognitive strategy and Evaluation.

The result showed a non-significant correlation between metacognition and reading comprehension ($r = 0.13$, $P = 0.058$) but awareness and cognitive strategy subscales were significantly related to reading comprehension. The result showed that metacognition can be assessed directly and explicitly. It also indicated a relationship between metacognition and comprehension.

The results proved that the present inventory was an internally consistent and partially valid tool for measuring metacognition.

3.3.7 Researchers: Hamman, Lynne A & Stevens, Robert J.\textsuperscript{20}

Title: Metacognitive Awareness Assessment in self-regulated learning and performance measures in an introductory Education Psychology course.

Place: The Pennsylvania State University, USA

Year: 1998-04-00

Source: American Education Research Association, (San Diego, CA, April 13-17, 1998) PP. 1-8, ED 424 249

The study investigated relationship among Metacognition, Motivational orientation, Strategy use and Performance of 90 college students in self-regulated learning. The tools used in the study were MAI (Metacognitive Awareness Inventory), Schraw and Dennison, 1994 and MSLQ (Motivated Strategies for Learning Questionnaire) Pintrich, Smith, Garcia and Mckeachic, 1991 to measure metacognitive awareness and motivation and strategy use respectively. Academic performance was measured by a 20 item multiple choice test from course test bank.

First objective of the study was to investigate knowledge of cognition in the light of learning behaviours and test performance. It was positively correlated to pre-test judgement (0.507) and performance measures (0.333), second objective was to investigate the relationship between metacognition and motivation factors. Knowledge of cognition was correlated
positively with self efficacy for learning and performance (0.502) and negatively correlated with Test Anxiety (-0.408). Metacognitive self-regulation was correlated with both knowledge of cognition (0.393) and regulation of cognition (0.721) of MAI. The study provided the evidence that student's metacognitive awareness was related to their task motivation and subsequent use of strategies to self-regulate.

### 3.3.8 Researchers: Lindner (et. al.)

Title: The Development and Evaluation of a Self-Regulated Learning Inventory and its implications for Instructor-Independent Instruction.

Place: Western Illinois University, USA

Year: 1992

Source: ERIC – ED 348010,


The study examined five dimensions of (1) Metacognition (2) Learning Strategies (3) Motivation (4) Contextual sensitivity and (5) Environmental utilization control. Inventory contained 71 items on a five point scale. The sample 104 female college students. GPA (Grade Point Average) was used as a measure of academic achievement. Total score and scores on each subscale correlate significantly with the GPA. The correlation between sex and total score was significant but that between class and total score was not found to be significant.

The study concluded that self-regulated learning can be measured and it was an important component in academic success. It suggested that Self Regulated Learning Inventory (SRLI) was useful as a diagnostic tool and it also promotes self-regulation.

### 3.3.9 Researchers: Cleary (et. al.)

Title: Effectiveness of the self-regulation empowerment program with urban high school students.

Pub. Dt.: 2008-00-00

Source: Journal of Advance Academics

URL: http://www.eric.ed.gov – EJ 835869
The article emphasised the importance of self-regulation processes to enable students to become more active and strategic participants in their learning. For this, teaching learning strategies with specific forethought and reflective thinking skills were very necessary. It is often found that the academic problems encountered by students were generally caused by deficits in self-regulatory skills and motivation. It suggested conceptualization and implementation of Self-Regulation Empowerment Programmes (SREP) at classroom level. Some of the techniques to promote self regulation that teachers can use were setting performance goals, monitoring progress and utilizing self reflective processes. Emotional competence, Mental Health status scale and achievement test were administered. The findings implied that emotional competence was the best predictor of achievement. Mentally healthy children accept their responsibility, make their own decisions, plan ahead, set realistic goals and do their best when faced with problems. They learn how to learn and take pride in enhanced intellectual efficiency. Therefore emphasis should be laid on creating proper school climate to enhance the development of mental health of pupils.

3.3.10 Researchers :- Hunik Sri Runing Sawitri and Asri Laksmi Riani

Title :- Creativity and Dimensions of Emotional Intelligence as predictor of performance.

Year. :- 2007

Place :- University of Sebelas Maret, Surakarta, Indonesia

Source :- Google Scholar

The study investigated the relationship between creativity and student achievement and the role of EQ. (Emotional Intelligence) in ensuring academic achievement. Required null hypotheses were constructed to check the positive effect of creativity and dimensions of EQ on student performance individually and collectively.

The study was conducted on 176 students from the faculty of Economics, of State University of Surakarta. Sample were selected by cluster sampling technique and the data were collected by giving questionnaire directly to the students. Self made five point scales were used to measure creativity and dimensions of EQ. GPA (Grade Point Average) was taken as a measure of
academic achievement. Multiple regression method was used for analysis. Results showed that the students have moderate level of creativity but high level of self-regulation and self-awareness. Both creativity and dimensions of EQ had a significant positive effect of student performance (GPA). F value also indicated a combined significant positive effect of creativity and dimensions of EQ on student's GPA.

3.4.0 National Level Research Studies

- Kaur, M. (2001)\textsuperscript{24} in her study of Emotional Maturity found that student with high IQ had high emotional maturity and enjoyed greater academic success.

- Gakhar, S. C. (2003)\textsuperscript{25} examined the relationship between emotional maturity and self-concept on academic achievement and found that level of emotional maturity varied in case of (1) students of government schools and private schools (2) Hostellites and day schoolers (3) Children of working mother and homemakers. The study found a negative correlation between self-concept and emotional maturity and academic achievement and emotional maturity.

- Gakhar S. C. and K. D. Manhas (2006)\textsuperscript{26} in their study on Emotional intelligence found positive significant correlation between EI and Creativity (\( r = 0.610 \)) EI and academic achievement (\( r = 0.128 \)) and EI and general intelligence (\( r = 0.208 \))

- Darsana, M (2007)\textsuperscript{27} Studied the relationship between Emotional Intelligence and achievement facilitating variables and found significant relationship between EI and achievement motivation. Significant gender difference existed with boys having more emotional understanding and social skills than girls.

- Chaudhary, Vineeta (2008)\textsuperscript{28} in her study of impact of academic achievement on creativity found the relationship between creativity and academic achievement to be positive and significant in case of creative students but negligible in case of non-creative students.

- Subramanyam K. and Srinivas K, Rao (2008)\textsuperscript{29} studied the impact of gender on EI and academic achievement and the relationship between EI and academic achievement. The study revealed significant gender difference existed with regard to EI but in case of academic achievement, there was no gender difference and there was no relation between EI and Academic achievement.
Usha, P. and Rekha (2009)\(^{30}\) examined EI and mental health as predictors of academic achievement and found EI as the best predictor of academic achievement. Mental health augmented their abilities to plan and execute and to face problems. So emphasis must be put on development of mental health of pupils.

Chopra, Vanita (2009)\(^{31}\) concluded that EI help both the teachers and students in use, control and managing their emotions and also makes the process of teaching and learning more effective.

Lather, Manish (2009)\(^{32}\) indicated negative correlation between EI and Psychological distress. EI was found to be helpful in reducing psychological distress among students.

Detailed information for some relevant studies conducted at the National Level were available so they are recorded here in detail.

### 3.4.1 Researcher :- Gupta, O. V.\(^{33}\)

- **Title** :- Intelligence, Creativity, Interest and frustration as functions of class achievement, Sex and Age.
- **Place** :- Agra University, (Ph.D., Psychology), U.P.
- **Year** :- 1977
- **Source** :- Forth Survey of Research in Education

The study was conducted on 120 male and 120 female students from std. IX to XII of Age 13 to 17 selected through Stratified Random sampling technique.

Objectives of the study were (1) to determine status and roles of scholastic achievement, Sex and Age as they are related to intelligence, Creativity, Interests and frustration (2) To trace growth of intelligence, creativity, interests and frustration during adolescence and (3) To provide Scientific facts for creativity education in the Indian setting.

Tools used were Group Intelligence Test by R. K. Tandon, Creativity test and frustration scales by N. S. Chauhan and G. P. Tewari and Chatterji's Non-verbal preferences record. Factorial design analysis of variance of equal cell size followed by Duncan's short significance Range Test were employed to analyse data.
The study revealed following findings –

1. Scholastic achievement promoted Intelligence, Creativity and Scientific-Medical and Technical Interests upto fifteen years.
2. Interests were sex prone, Fine arts, Literacy and Medical were feminine; Agriculture and Technical Craft were masculine
3. Sports interest was feminine in high achievers and masculine in low achievers.
4. Age also affected interest.
5. Scholastic Achievement affected modes of Frustration. Onset of adolescence promoted regression, fixation and aggression.

3.4.2 Researcher :- Acharyulu, S.T.V.G

Title :- A study of the relationship among Creative Thinking, Intelligence and School Achievement.
Place :- Utkal University (Ph.D. Psychology), Orissa, India.
Year :- 1978
Source :- Third Survey of Research in Education. Study 950

The study was conducted with the objectives to clarify the nature of relationship among Creativity, Intelligence and School achievement and to test their interaction effect. It contained sample of 200 male and 200 female students from 12 schools of Guntur and west Godavari district of Andhra Pradesh.

Tools used included verbal and non-verbal batteries of Torrance Test of Creative Thinking and Cattell's Culture Fair Intelligence Measurement (CFIM) scale 2, from B. Achievement was based on marks obtained in two successive school tests. To analyse, correlation, 7x3 factorial design, multiway ANOVA and scheffe's contrasts were used.

Main findings of the study were (1) There was no sex difference in intelligence, Figural creativity and Achievement in Telugu, Science and SS But there was significant sex difference in verbal creativity and achievement in English and Mathematics and it was in favour of girls. Overall performance was better on verbal TTCT than on figural TTCT. Interaction effect between Intelligence and creativity was not significant in 34 of 35 factorial design. There was also significant disordinal interaction between intelligence and figural elaboration. The main effect of intelligence and Creativity were significant in 33
out of 35 F-values. No evidence was found on existence of maximum or minimum intelligence thresholds.

3.4.3 **Researcher :- Singh, O. P.**

Title :- A study of Creativity in High School students in relation to intelligence and socio-economic status.

Place :- Avadh University, (Ph.D. Education), U.P., India.

Year :- 1982

Source :- Third Survey of Research in Education, Study No. 586 Page 421

The investigation aimed to study the relationship between creativity, intelligence and socio-economic status. It was performed on 400 Urban + 400 Rural high school students of Varanasi and Faizabad. Tools used included Joshi's test of Mental Ability to assess intelligence, Baker Mehdí's test to measure Creativity and a questionnaire to collect information about SEs. The Mean and SD were calculated and critical ratios were worked out to test the significance of difference between Mean scores.

The Mean scores of Urban and Science students were significantly higher than Rural and Arts students in both cases of Intelligence and Creativity. Whereas Urban students enjoyed the higher SEs than that of Rural Students.

3.4.4 **Researcher :- Jahedi, Soheyla**

Title :- A study of relationship between Motivational belief and Self regulated strategies and Academic achievements of school students.

Place :- University of Pune, Dept of Edu. Ph.D., Pune, India.

Year :- January, 2007

Source :- http://hdl.handle.net/10603/3842

The study was undertaken to explore and identify the relationship among motivational belief (self-efficacy, intrinsic value, test anxiety) and self regulated strategies (cognitive strategy and self-regulation) and academic achievement. It was aimed to workout the influence of motivational belief and self regulated learning components on academic achievement and also identify gender difference on them.
Sample was selected from 8th Std. students in the age group of 12 to 15 years from English medium schools in Pune city. Tools used for the study included self report inquiry and Motivated Strategies for Learning Question (MSLQ). The alpha co-efficiency reliability of the MSLQ showed high internal consistency. Statistics used for data analysis were Pearson's product moment correlation, t-test and ANOVA.

Major findings of the study were (1) There were significant correlation between motivational belief components and self regulated learning components (2) All components of motivation and self regulated learning strategies influenced academic achievement (3) There was no significant difference between boys and girls on motivational belief components but significant difference existed in cognitive strategy and self regulation.

3.4.5 Researcher :- Sharma, Manojkumar

Title :- A study of relationship of Emotional Intelligence with Adjustment, Stress and Achievement among senior secondary students.

Place :- Dept. of Education, Maharshi Dayanand University, Rohtak, India

Year :- November, 2011

Source :- Shodhganga - INFLIBNET

The study focussed on the relationship of Emotional intelligence (EQ) with Adjustment, Stress and Achievement among senior secondary students. It was conducted on 200 students of Delhi region comprising of male and female students of 17 to 20 years from urban and rural area. Emotional Intelligence Scale (EIS) developed by Anukool Hyde Sanjyot Pethe and Upinder Dhar (2007), Adjustment inventory develop by H. M. Bell (1934) and Stress Scale (Bist Battery of Stress Scale (BBSS) developed by Abharani Bist (2006)) were used to collect the data. Previous class score was taken as achievement.

Major findings were-

1. Positive correlation existed between EQ and Academic achievement.
2. Negative correlation existed between EQ and Stress.
3. Positive correlation existed between EQ and Adjustment.
4. There was significant difference between the Mean score of high and low emotional intelligence group students on variables like Stress, Adjustment and Academic achievement.

5. The difference was significant between the Mean scores of Urban and Rural and male and female students having high and low emotional intelligence.

3.5.0 State level researches

3.5.1 Researcher :- Bhogayata, C. K.\textsuperscript{38}

Title :- A study of the relationship amongst creativity, self-concept and locus of control.

Place :- Saurastra University, Gujarat

Year :- 1986

Source :- Forth Survey of Research in Education

The study was carried out on 1014 students (671 Boys and 343 Girls) selected by using stratified random cluster sampling technique from 10,000 students of Std. X, Gujarati medium students of Bhavnagar District.

The main objectives of the study were (1) to compare the creativity, self-concept and locus of control of Boys and Girls and also Urban and Rural students. (2) to find out the magnitudes and directions of the correlations and multiple correlations of self concept and locus of control with fluency, originality and creativity. 31 operational Hypotheses were formulated for the study.

Tools used for the study were (1) Creative Expression Test (Janakray Dave) (2) The self Concept Inventory (Jayantilal Shah) and a Gujarati adaptation of Rotter's Internal – External locus of control scale by the investigator. The reliability for the tools ranged from 0.812 to 0.942 and validity ranged form 0.470 to 0.883. Both descriptive and inferential statistics were employed to analyse the data.

Major findings were (1) Boys were more creative than girls but did not differ in there self-concept and locus of control. (2) Urban students had a higher self concept but did not differ in their creative and locus of control from Rural students. (3) All the correlations were linear, positive and significant at 0.01 level. (4) All multiple correlations were positive and significant at 0.01 level.
(5) students with higher self concept were more creative, original and fluent. (6) the main effect of self-concept and locus of control on creativity were significant but their interactive effect was not significant.

3.5.2 Researcher :- Desai, N. N.  

Title :- An Investigation into the Creative Thinking ability of students of Higher Secondary of Gujarat State in the Context of some Psycho-Socio factors.

Place :- S. P. University, Gujarat

Year :- 1987


Main objectives of the study were (1) To prepare a reliable and valid Creative Thinking Test (2) To study the trends of Creative Thinking ability of pupils of different sexes, streams, SE$_S$ levels and scholastic achievement, Anxiety and Reasoning ability. The study was conducted on 608 students which included boys and girls from both Urban and Rural area.

The tools used in the study were verbal and non-verbal Creative Thinking Ability Test developed by the researcher himself, SE$_S$ scale by B. V. Patel and I. A. Vora, Anxiety scales by Nijhawan. The reliability of test ranged form 0.82 to 0.90. A 2x2 factorial design and ANOVA was used to test the hypotheses.

Major findings were (1) There were no difference in Creative Thinking Ability of Urban and Rural students, Boys and Girls, Science and General Stream students and High and Low SE$_S$ Students. But the Mean difference between high and low anxiety students was highly significant in favour of low Anxiety students. It was also found that the students with radical personality, High emotional stability with good reasoning ability and with higher scholastic achievement were more creative.
3.5.3 Researcher :- Chaudhary, G. G.

Title :- An investigation into the trends of Creative thinking ability of pupils of age group 11+ to 13+ in relation to some Psycho-Socio correlates.

Place :- S. P. University, Gujarat

Year :- 1983


The study was about preparing a reliable and valid Creative Thinking Ability test to study the trends of creative thinking of pupils of different areas, sexes, age group, Socio-Economic status (SES), Need achievement (N-ach) I.Q., Parental behaviour anxiety and some personality traits like Security-Insecurity, Radicalism v/s Conservatism, Flexibility v/s Rigidity and Emotional stability.

The test was standardised on a sample of 1000 students comprising 394 Urban and 606 Rural students. All relevant inventories were used. Norms were established in terms of P(n) and PR and factorial design was used to analyse the data.

Major findings were (1) There was no significant difference in the Mean scores of Urban and Rural, Male and Female students. Higher SESs and N-Ach Showed higher Creative Thinking Ability but high IQ and High parental behaviour did not have more creative thinking ability. The students with high security, high Radicalism trait, higher Flexibility, higher Emotional Stability and low Anxiety displayed more creative thinking ability.

3.6.0 Brief summary of reviewed literature and justification for the present study:

The researches reviewed bring to the fore certain patterns and facts. Most of the researches related to the present study dealt with self-regulation of learning. Process involved, metacognition and their impact on academic achievement. One can broadly generalise from the findings that metacognition and Self-regulatory process have a positive and significant effect on academic achievement. Self regulation of learning is an important component and very useful for teachers and students both.

EQ is a good predictor of success as it also has a significant and positive impact on academic achievement. EQ helps in reducing stress and facilitates adjustment.
Some studies also revealed that creativity and creative thinking ability also has a positive, significant effect on academic achievement and CT combined with EQ impacts GPA significantly.

Some studies found significant gender difference in case of creativity but in case of Area, Stream etc. no difference could be found.

Most of the researchies related to the subject were either done at international level or were carried out long back. Keeping in mind the differences prevalent in the spheres of education, society culture, ideology etc. these findings can not be applied straightaway to Indian set-up. This necessitates a fresh look in the concepts of Self-regulation in local set-up and try to find out whether earlier findings hold true for the present study or not. Probably no study was carried out combining Self regulation of learning with EQ and CT at local level. So that was an additional driving force to conduct the present study.

3.7.0 Conclusion :-

As evident from the detailed studies presented in this chapter, there was hardly any research work carried out at state (local) and national level involving Self-Regulated learning and Self-Regulated learners. But at international level, there were quite a few researches that study Self – Regulated learners, Self-Regulatory ability and processes, their role in making learners more active and strategic participants. Some research also developed a self-regulatory inventory and examined various dimensions and components of self regulation of learning. Some researches studied the synergies of Self-Regulated learning with Creativity and motivation whereas some focussed on the effect of metacognition only in self-directed learning set-up. One of the research investigated the relationship among the major variables / components of self-regulated learning.

All international studies except one were carried out on a very small sample size which ranged form 60 to 300. Moreover all were limited to a particular department or college of a university. At national and state level also, the sample size did not exceed 1000 while considering the time frame also, most of the researches were carried out in eighties, nineties and first decade of 21\textsuperscript{st} century. Very few researches were carried out in the resent past.

So there was a need for new researches in all these areas to factor in the changes effected by knowledge explosion and enormous technological growth witnessed in the last 10 to 15 years.
The present study was aimed at developing and standardising an inventory to identify self regulated learners in the context of Gujarat State and Gujarati medium Students. The sample size was also quite large at 2000 students representing different dynamics of Area, Gender, Stream and Standard. The Reliability and Validity of the newly constructed tool were computed and Norms were also established to facilitate future use and to ensure that the results obtained by using the tool be valid and relevant.

All the above factors clearly indicate that there was a genuine need for the present research / study and it would surely contribute positively to the emerging field of Self-Regulated learning and Learners.
References


6) C. Peklaj, & S. Pecjak (2002), Differences in students' self-regulated learning according to their achievement and sex. Studia psychologia, 44(1) pp. 29-43.


8) P. Pokay, & P. C. Blumenfeld (1990), Predicting achievement early and late in the semester : The role of motivation and Use of learning strategies. Journal of Educational Psychology, 82, pp. 41-50.


23) Hunic Sawitri, et.al. (2007), "Creativity and Dimensions of Emotional Intelligence as predictor of performance." University of Sebelas Maret, Sarakarta, Indonesia, [Source : Google Scholor].


33) O. V. Gupta (1977), "Intelligence, Creativity, Interest and Frustration as functions of class achievement, Sex and Age.", Ph.D. Psychology, Agra University, U.P., In fourth Survey of Research in Education by M. B. Buch, NCERT, New Delhi: (1991), Study no. 938), pp. 825-826.

34) S. T. V. G. Acharyulu (1978), 'A study of the relationship among Creative Thinking, Intelligence and School Achievement.', Ph.D. (Psychology), Utkal University, Orissa, India, Third survey of Research in Education by M. B. Buch Published by (NCERT, New Delhi), study no. 950, p. 657.


37) Manojkumar Sharma (2011), 'A study of relationship of Emotional Intelligence with Adjustment, Stress and Achievement among senior secondary students.', Ph.D. (Education), Maharshi Dayanand University, Rohtak, India, Source : Shodhganga – INFLIBNET

